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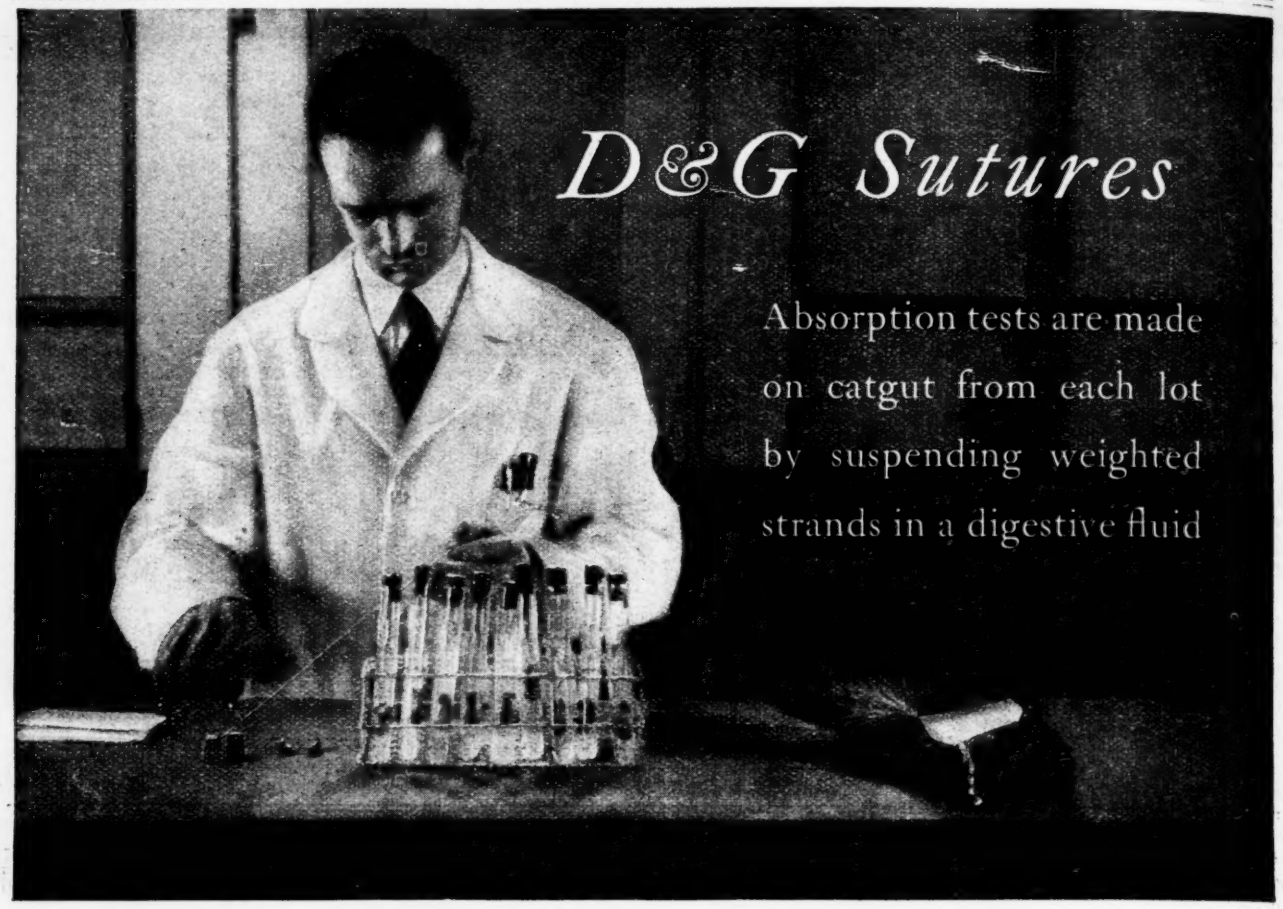

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A British Medical Association Lecture
ON
MINOR ORTHOPAEDICS OF THE FEET IN GENERAL PRACTICE.

DELIVERED TO THE NORTHERN COUNTIES OF SCOTLAND BRANCH, NOVEMBER 2ND, 1928,

BY

JOHN FRASER, M.D., F.R.C.S.ED.,
REGIUS PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH, AND SURGEON TO THE ROYAL INFIRMARY.

THIS address includes the consideration of a number of conditions apparently so simple that some may feel that there is nothing new to be said about them; but I have noticed that minor orthopaedic disabilities are remarkably common, that among the work of a young consultant they form a considerable proportion of his material, and since they come to the institution and the consultant, I infer that they are a source of trouble and anxiety to the man in general practice. When I add that many of these conditions are among the most difficult to treat and to cure, I have justified, I hope, the choice of my subject. I propose to illustrate what I have to say by short abstracts from case notes, and, so far as possible, to demonstrate the conditions to which I refer.

INGROWING TOENAIL.

My first patient is a woman, and the reason of her visit is the presence of a painful ulcer on the lateral nail border of the great toe. It seems a small thing, but to my patient, who has been seriously affected by the dancing craze, it is a disaster. With Cowper she would no doubt exclaim:

> "O may I live exempted . . .
> From pangs arthritic that invest the toe
> Of libertine excess."

As a matter of fact, she was suffering from an ingrowing toenail, one of the most painful and distressing of the minor maladies of the feet.

So perfect are the provisions which Nature has made to guard against this disaster that the sufferer must have flagrantly destroyed one or more before Nemesis overtook her. If you examine the nail-fold (Fig. 1) you will find that these provisions are two—the edge of the nail is curled upon itself so that a convex surface is opposed to the skin surface, and, as though that were insufficient, the skin in contact with the nail-edge is of a more horny texture than that around—the result of the deposit of

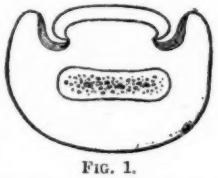

FIG. 1.

FIG. 2.

FIG. 1.—The toenail on coronal section. Note the infolding of the nail-edge, and the special epithelium with which it makes contact.

FIG. 2.—Cutting a toenail. The nail should be cut at right angles to its long axis—*not* in a curved manner.

a considerable amount of eleidin granules in its cells. These safeguards are present in both foot and hand, but, owing to the relatively greater pressure which the foot-nails have to bear, they are more efficiently developed in the latter situation.

An ingrowing toenail results from one or both of two errors: either the nail is cut convexly so that the protective infolding of its edge is destroyed, or the special stratified epithelium is removed, and its safeguard thus eliminated. My patient had been guilty of both errors. She had been cutting her nails convexly, and at the same time, in order to improve the local appearance, she had been using a preparation containing salicylic acid, which she had been brushing over the nail-fold, and so removing the valuable horny layer. Is it any wonder that, as her nail grew, its now sharpened and unfolded edge, coming into contact with a delicate and unprotected epithelium, produced at the point of contact a most painful and intractable ulcer? (Fig. 2.)

Treatment of Ingrowing Toenail.

What was to be done? To remove the toenail is rather a desperate remedy; it is certainly a very painful one. It may involve weeks of crippling, and should only be resorted to when all other measures have failed. Cutting away that portion of the nail which impinges upon the ulcer is the procedure perhaps most frequently adopted, and, if it is accompanied by careful packing of the ulcer surface with an antiseptic gauze or wool, it may ultimately prove successful; but it has the risk that the natural infolding of the nail may not reappear, in which event ulceration is sooner or later bound to recur.

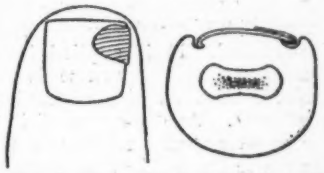

FIG. 3.—The method of tinfoil application in the treatment of ingrowing toenail.

In my experience there are two simple and efficient remedies, neither of which is perhaps sufficiently known. The nail-fold may be protected by restoring the convex nail-edge, which is done by wrapping around the offending nail-edge a small oval-shaped piece of soft tinfoil, so arranged that a fraction of it lies on the under surface, the remainder on the nail surface. It is fastened in place by a drop of sterile glue or strong collodion. A fragment of Stent wax is sometimes used instead of the tinfoil, but it is brittle and apt to break. While the protection is in place the ulcer is lightly packed with a spirit solution of one of the aniline dyes, this being used because it increases the cornification of the epithelium and so stimulates the formation of the protective layer. (Fig. 3.) The second simple remedy is sometimes known as Webb's wire, which acts by maintaining a constant separation between nail-fold and nail-edge, and I can vouch for its efficacy in curing the early stage of this troublesome ailment.

HAMMER-TOE.

My second patient presents herself because of the common and troublesome condition of hammer-toe. It has affected the second toe, as it usually does, because it is the longest of the outer four, and is liable to be displaced and cramped if any lateral displacement occurs in the great toe (Fig. 4). In this patient's case the deformity is well marked; in other words, there is pronounced flexion of the proximal intraphalangeal joint; it is not congenital, and a glance at her shoes shows the cause in the badly shaped and centrally pointed type of sole. It is a hopeless task, I am afraid, to expostulate with women on this score; the majority of them fully realize the risks, but feel, in the words of the old Scottish proverb, "As weel be oot of the warld as oot o' the fashion."

FIG. 4.—A hammer-toe deformity affecting the second toe of the right foot.

Treatment of Hammer-toe.

I suggest to the patient that a simple minor operation will prove the most satisfactory, and in the long run the most rapid method of cure. But operation she will not hear of, and conservative measures must therefore be adopted. What are they to be? and what prospects do they offer of improvment or cure? Answering the latter question first, there can be no doubt that, if the case is an early one, and if efficient conservative measures are adopted and persevered in, good results are obtained. What are the efficient conservative measures? My own choice is in favour of what is termed the "cradle method."

It is carried out by means of two narrow strips of sticking-plaster, and is sufficiently illustrated in the diagram. (Fig. 5.) This procedure has great advantages: it is simple and comfortable, but, above all, the improvement which it induces is progressive, for with every step the patient takes there is a stretching of the contracted tissue and an improvement in the position of the parts. By this simple means an operation is often obviated.

FIG. 5.—A hammer-toe deformity treated by the "cradle" method.

There are other conservative measures, but I do not think they are so good as the "cradle." There is the insole provided with an elastic loop into which the contracted toe is inserted. It is applied inside or outside the stocking, but if the second course is chosen the stocking must be knitted so that the affected toe occupies a single compartment. Another method is the use of a light aluminium splint strapped underneath the toe and extending from its tip to the level of the metatarso-phalangeal joint. Both of these methods, however, are, in my experience, uncomfortable, and by no means so efficient as the cradle method.

If operation is adopted it is simplicity itself—a transverse incision on the dorsum of the flexor joint, excision of a wedge carrying the articular surfaces and reposition of the toe in a straight attitude, the shortened tendon being divided by tenotomy. Thereafter (and this is an important detail which is often neglected) the toe must be splinted so that ankylosis occurs at the point of excision, the splintage being provided by a narrow strip of aluminium strapped to the under surface of the toe.

As the result of the hammer-toe this patient has two troublesome corns. They are at the points of maximum pressure—on the convexity of the interphalangeal flexion deformity and on the tip of the terminal phalanx immediately below the nail. They will in all likelihood disappear when the error in position is corrected, but, in case they do not, they will yield to an application of 10 or 15 per cent. salicylic collodion, or they may be pared and excavated with a sharp knife and a covering of newskin applied. The last detail is important, for attention to it after removal of the corn will often prevent recurrence of the trouble.

HALLUX VALGUS: ITS CAUSE.

My third case is an example of an exceedingly common error. It is the hallux valgus deformity of the first metatarso-phalangeal joint, the great toe being deflected outwards so that it lies over or under the second toe (Fig. 6). The patient is a woman, and after recounting the pain and discomfort from which she is suffering because of the pressure of her shoe upon the inflamed bursa or bunion overlying the prominent head of the first metatarsal bone, she inquires as to the cause of the condition. It has been said that an undue activity of growth in the epiphysis at the base of the first metatarsal bone explains the occurrence of a certain proportion of cases. This may be so, but in the majority the cause is flat-foot, with which a hallux valgus of any degree is almost invariably accompanied. The sequence of events is probably as follows: The foot adopts an attitude of valgus error, and there come into play two influences which lead to the development of the hallux valgus deformity. First, as the valgus error becomes established an attempt is made to restore the balance by bringing into play the short muscles of the sole. Into the fibular side at the base of the proximal phalanx of the great toe three muscles are inserted, the two adductors (oblique and transverse) and half the flexor brevis. Their influence is to pull the toe into a valgus attitude. The abductor might have opposed this influence, but it is already weakened by the flat-foot error, and the result is the gradual development of hallux valgus. The second influence is in relation to the shoe. As the flat-foot develops the inner portion of the shoe—the golosh and the sole waist—stretches and weakens, the foot arch falls, and the valgus error of the foot is more fully established, but the toes are fixed in the anterior part of the sole, and therefore, as the inner side of the foot falls inwards the great toe is deviated outwards, and the hallux valgus is thus more fully established. I have dealt with this question in some detail because it has an important bearing upon the treatment of the condition, and I am anxious to establish the truth of the statement that a hallux valgus does not usually develop without the accompaniment of a flat-foot error.

FIG. 6.—A hallux valgus deformity of the great toe.

Treatment of Hallux Valgus.

What can I do to relieve this unfortunate patient? As it happens, the condition is not sufficiently advanced to demand operative intervention, and I accordingly concentrate my attention on conservative measures. I recommend certain alterations in the shoe, and the wearing of a remedial appliance while the patient is resting in bed. The alterations of the shoe are important, for not only do they exert a curative effect upon an early case, but they afford enormous relief to the discomfort and suffering of the individual. Here are the instructions. The shoe must be reasonably straight along its inner side. Where the prominent head of the first metatarsal would naturally impinge upon the boot upper this must be softened or even cut out to allow the insertion of a specially thin piece of material. It is wrong to allow the continuance of pressure upon the tender prominence, as this will only increase the development of the bursa and accentuate the deformity. The golosh must be strengthened by inserting a strip of strong leather from the heel across the boot or shoe waist to behind the head of the first metatarsal bone, and support is given to the longitudinal arch of the foot by inserting and cementing to the sole a rubber instep pad. These details are, of course, designed to improve the flat-foot error. Perhaps the most helpful manœuvre of all, however, from the patient's point of view, is the attachment to the under surface of the sole of a metatarsal bar half an inch broad and a quarter of an inch in depth. It is placed, like the bars of a football boot, across the sole, immediately behind the metatarso-phalangeal joint, and it gives the most wonderful measure of relief, because it takes the body weight off the affected and painful joint.

Many other suggestions of boot alteration have been put forward, but they are not of great practical value. One (the attachment of a stud to the upper surface of the sole so that it projects between the first and second toes) may at first sight appear attractive, but those who have tried to coax the delinquent toe into its stall have realized how tantalizing and wellnigh impossible a task it is; and if they have by any chance achieved the seemingly impossible they have realized how great is the discomfort which results on attempting to walk. If any additional manœuvre is of value, it is the provision of a specially woven stocking made like a mitten, with a special compartment for the great toe. I have heard the late Professor John Chiene recommend this procedure, and it has a certain practical value.

The time to adopt more active corrective measures is when the patient is bootless and resting, and there is upon the market an efficient appliance designed for this purpose. A light firm splint extends along the inner side of the great toe and medial border of the foot. It is secured to the toe by means of a broad elastic webbing loop, and the distal portion is fastened to the metatarsus by a broad strap and buckle. In applying the splint the toe is first inserted into the elastic loop, and the correction is then produced by placing the remainder of the splint in line with the side of the foot and securing it there by its strap and buckle.

With the question of operative intervention, should it become necessary, I do not propose to deal beyond saying that any procedure which may result in shortening the length of the longitudinal arch is bad in so far as it must weaken the foot. For this reason the

head of the metatarsal bone should not be removed. It may be sufficient to remove the prominence from the inner side of the metatarsal head, but, if something further is required to secure correction, it is better that it should concern the base of the first phalanx than the head of the metatarsus.

HALLUX RIGIDUS.

My fourth problem is a peculiarly troublesome one. The patient is a keen walker—in fact, walking is his chief exercise and recreation. You can imagine his distress when he finds that his activities are becoming seriously crippled owing to stiffness and pain in the joint of the great toe of his right foot. He has, in fact, a well-marked hallux rigidus, and it is impossible to secure any degree of dorsiflexion in the metatarso-phalangeal joint of the toe.

It may be asked why such a seemingly simple error should be so crippling in its effects. We find the answer when we analyse the process of walking. As a stride is taken the heel and the outer side of the foot make contact with the ground; the pressure is momentary, for, as the body passes forwards over the centre point of the foot the weight is transferred to the forepart of the foot, and more particularly to the prominent heads of the first and fifth metatarsal bones. As the body continues to move forwards and preparations are made for the next stride, the heel is raised off the ground, the weight is borne by the forepart of the foot immediately behind the toes, while all the toes, but particularly the great toe, flex at the metatarso-phalangeal joints, and the actual impulse which carries the body forward for the succeeding stride is, in part at least, afforded by the flexed great toe levering the body forward against the fulcrum of the ground. It is evident now how disastrous must be the consequence if the metatarso-phalangeal joint of the great toe is painful or in any measure fixed.

Etiology of Hallux Rigidus.

Invariably there comes the question, How has this arisen? Injury can be excluded in this case, though it is evident that there are instances in which a hallux rigidus may follow injury to the joint or the neighbouring bones. There has been a history of rheumatism, and this may play some part in the secondary changes of the part, but the real explanation is to be found in the statics of the foot behind the region of the joint. In the case under discussion there had been a severe influenzal illness some months preceding the development of the foot error. Walking and standing were resumed with limb muscles of a poor tone, and as a result a longitudinal flat-foot of a somewhat acute type developed. At once the line of gravity altered, and instead of passing between the heads of the second and third metatarsals it passed medially towards the line of the first metatarsal head. Excessive weight-bearing was the result, and the joint thereby affected (the first metatarso-phalangeal) suffered. The cartilage became thinned, the approximated bony surfaces were deformed and flattened, there were signs of osteo-arthritis in the shape of lipping of the joint edge, and periarticular fibrosis. The acquisition of a rigid joint was only a matter of time. In certain patients a still more distressing stage may develop, for the pain of the stiffening joint is responded to by contraction of the flexor brevis hallucis, and if this is permitted to continue it will result in a great toe fixed in plantar flexion—a hallux malleus—one of the most painful and crippling of foot errors.

It is to an underlying flat-foot that the majority of cases of hallux rigidus owe their origin, and it obvious how important is an appreciation of this point when the question of treatment comes to be considered.

Treatment of Hallux Rigidus.

What of the treatment? It is none too easy, and, paradoxically enough, in certain cases the most fruitful line of treatment is to secure complete fixation of the affected joint, for with this result pain at least disappears.

Here are some suggestions which may prove helpful. It is evident that correction of any coincident or pre-existing flat-foot is essential, and the usual steps are accordingly taken: the inside of the boot sole is raised by one-eighth of an inch, an efficient longitudinal arch support is fitted, the golosh is strengthened, the musculature of the foot is improved by exercises and massage, and it may be that the conjunction of these various measures, in so far as they restore the statics of the foot, will relieve the hallux rigidus. Raising the heel of the boot is sometimes helpful; it seems to diminish the pain, and it maintains the toe-joint in such a position of slight dorsiflexion as to increase the comfort of walking, even if fixation should occur.

It has been recommended that the joint should be freely moved under an anaesthetic and fixed in plaster in a dorsiflexed position for a few days, thereafter ensuring a course of free, active movements. My experience with this procedure has been disappointing, for it has seemed that in a certain proportion of cases it resulted in increased discomfort. I am coming to the conclusion that a better conservative measure is to encourage fixation in the toe, a condition secured in some measure by incorporating in the boot sole, immediately underneath the loose inner sole, a strip of thin steel or duralumin extending from the middle of the instep to the interphalangeal joint of the toe. It has been my experience, however, that conservative treatment is unsatisfactory, and that there is little prospect of improvement until operative intervention has been carried out.

Of the various operative procedures the best is that which entails removal of the base of the proximal phalanx and the tacking of a flap of fascia derived from the medial aspect of the toe over the raw surface of the bone. It is certainly unwise to remove the head of the metatarsal bone, for, if this is done to an extent required to correct the joint error, the stability of the longitudinal arch, and therefore of the foot, is seriously interfered with.

"MARCH FRACTURE."

My fifth case is of interest from the point of view of recognition of an injury which is easily overlooked. The patient had been on a walking tour carrying a heavy pack, and on the last day of his tour put in a walk of unusual length over rough ground. While he was on the last mile of his journey he experienced a sudden pain on the inner aspect of the foot immediately behind the heads of the first and second metatarsal bones. He imagined he had sprained the part; walking became a very painful affair, and shortly after the front portion of his foot became considerably swollen.

When he came under my care the signs were those of severe sprain with local tenderness behind the second metatarsal head; but an *x*-ray examination revealed the presence of what is termed a "march fracture"—a fracture of the second metatarsal bone at that narrow portion which lies immediately behind the head (Fig. 7). The second and third metatarsals are the bones most liable to be affected, and it is supposed that the liability is related to the blood supply. Repeated spasmodic contraction of the interosseous muscles interferes with the distal blood supply of the foot, so that there is an atrophy of the second and third metatarsals at their phalangeal extremities. The necks of these bones are naturally slender structures, and the influence upon the blood supply further increases the fragility, so that one or other yields under a strain which in ordinary circumstances would have been harmless.

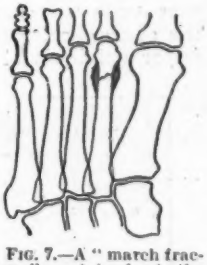

FIG. 7.—A "march fracture" sustained at the neck of the second metatarsal bone.

Once recognized, the treatment was easy. Fixation in plaster for three weeks was the plan adopted, but the importance of the case lies in the recognition of the possibility that in certain circumstances a fracture may occur in the course of such a simple exercise as walking.

"DANCING FRACTURE."

A somewhat similar experience illustrates my next case. The patient was dancing when she experienced on the outer side of her right foot a sharp pain, which she attributed to a kick from her partner. As the days went by the pain persisted and swelling appeared. What does

the radiogram reveal? There is a fracture at the base of the fifth metatarsal bone. (Fig. 8.) It is a mere chip off the base, and it has been produced, not by any direct violence, but by a sudden eversion of the foot and the pull of the peroneus brevis muscle. It is an example of what is appropriately called a "dancing fracture."

Here again the treatment consists in fixation of the foot until the fragment has reunited, and the interest is therefore not so much one of treatment as of the recognition of the fact that a fracture could have occurred in this somewhat indirect and oblique fashion.

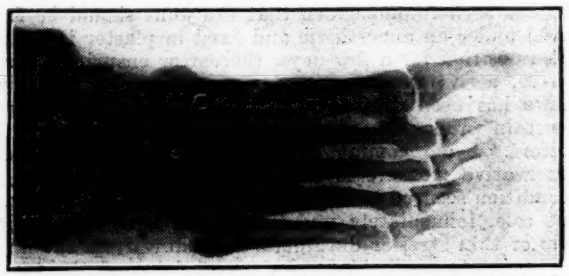

FIG. 8.—"Dancer's fracture" of the base of the fifth metatarsal bone, sustained by sudden eversion of the foot.

KÖHLER'S DISEASE.

Tarsal scaphoiditis, or Köhler's disease, is the subject of the next case. (Fig. 9.) A boy of 7 complains of discomfort on the inner border of the right foot, and there is an evident limp in walking. Examination reveals a swelling, apparently bony in source and occupying the position of the tarsal scaphoid bone. There was an indefinite history of a slight injury some months previously, which may or may not have a bearing upon this later development.

The condition gives rise to anxiety, and in the majority of cases fears are entertained that the condition is tuberculous. We have the comforting reflection that, whether specific treatment is adopted or not, the error passes on to spontaneous cure, leaving no trace of its existence except perhaps a predisposition to the development of flat-foot.

We know very little about Köhler's disease. It is in part a mystery why it should pick out the scaphoid. Three explanations have been put forward: (1) that the scaphoid is the last bone in the foot to ossify; (2) that, being the keystone of the arch, it is concerned with a great deal of weight-bearing; and (3) that it has a double or bilobed nucleus. While these may be predisposing influences in localizing the disease, we are by no means clear as to what constitutes the change. It is on a parallel with apophysitis of the heel bone, the Osgood-Schlatter's disease of the upper epiphysis of the tibia, and an unnamed condition of the crest of the ileum, similar in appearance and behaviour. The view generally held is that the condition proceeds from an obscure but distinctive infection, which, while not inducing pus formation, alters the texture of the bone and produces the irregular calcification distinctive of the condition. In some curious way it appears to pick out an epiphysis to which a tendon is attached.

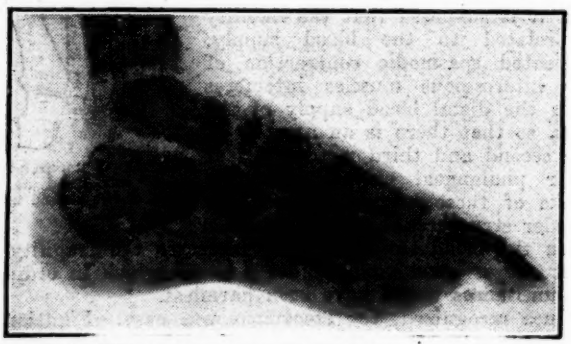

FIG. 9.—Köhler's disease or tarsal scaphoiditis. The ossification of the scaphoid is reduced to a small central nucleus. The actual size of the bone is not appreciably diminished, but the cortical areas are decalcified.

No special treatment is required. Fixation of the foot may be an advantage, but it is not essential, and I think that the affection improves more readily if events are allowed to take their course.

SESAMOID BONES.

Accessory bones of the foot are sometimes a source of trouble and anxiety. An example of this is afforded by the following case. A man, aged 37, jumped from the top of a bank to the ground, a distance of three to four feet. There was a jar to the joint, and some pain around the ankle ensued. The condition was treated as a sprain, and no *x*-ray examination was at first carried out. Later, the symptoms proving intractable, an *x*-ray photograph was taken, but the rule of always *x*-raying both the affected and the healthy foot was neglected. The radiogram showed a segment of bone lying behind the astragalus, looking as though there had been a fracture of a small fragment from its posterior surface. But another radiogram, on this occasion of both feet, showed that the condition was bilateral. It was, in fact, an example of the os trigonum, a curious accessory bone of the foot which lies immediately posterior to the astragalus, and may easily be mistaken for the fragment of a fracture, particularly if there is a history of a compression injury to the bone. (Fig. 10.)

FIG. 10.—The os trigonum situated at the posterior border of the astragalus and giving an appearance liable to be confused with a fracture of the posterior extremity of the bone.

The existence of these accessory bones (sesamoids they actually are) should always be kept in mind. The most important examples are the ones I have just described—the os tibiale externum, and the peroneal sesamoid.

PATHOLOGICAL CONDITIONS OF THE HEEL.

There are certain conditions of the heel which are sometimes sources of difficulty in diagnosis. Let me briefly refer to them with illustrative cases.

Calcaneal Spur.

The first case is that of a man of 42, stout and heavy in build. He is a rheumatic subject, and this point is important in explaining the pathological condition. His complaint is intense pain on the under surface of the heel. It is chiefly noticeable when he puts weight upon the part, and may be agonizing in its intensity. On local examination there is little of importance to be seen, but pressure with a blunt point produces pain at one spot. An *x*-ray photograph established the condition as one of calcaneus spur or spine. (Fig. 11.)

FIG. 11.—Calcaneus spur developing in a man aged 46, and causing severe pain on the under aspect of the heel.

The origin of the condition is disputed, but it is generally believed to follow a slight tearing of the periosteum on the under surface of the os calcis resulting from a dragging on the attachment of the flexor brevis digitorum muscle. Other factors probably operate—for example, undue friability of the tissue—but the real origin is apparently a local periosteal tear in an individual whose periosteum

is the site of a mild infective process, such as we find in osteo-arthritis.

The problem of treatment is by no means easy. It would seem a minor and satisfactory procedure to remove the spur, but we have no guarantee that it will not re-form, and in a more extensive degree. When we recall that these spurs may disappear spontaneously, we feel that there is room for non-operative treatment. This takes the form of "protection." A thick felt is placed below the situation of the spine, a cup-shaped hollow ensuring freedom from pressure on the offending prominence. I am told that diathermy is of great value in hastening absorption of the deposit, but I cannot speak of this from personal experience.

Irregular Ossification of the Calcaneus.

The next two cases are examples of pain complained of at the back of the heel. The first patient is a 10-year-old schoolboy, in whom the pain first occurred after a long run. Since its onset it appears to have been produced by any undue amount of walking or running. It is described as an ache rather than a sharp pain, and with it there is often a cramp-like contraction of the muscles of the calf.

On examining the part two features are evident: the calcaneus is slightly broadened behind, while pressure over this area produces slight discomfort. An *x*-ray photograph shows that the metaphysis of the heel bone at the junction of the epiphysis and the body of the bone is the site of an intense but somewhat erratic activity. New bone is being formed in isolated clumps rather than in the uniform deposit of a healthy ossification; there is undue congestion, and the epiphysis itself shows the mottling of irregular ossification. (Fig. 12.) The appearances are those of a selective irritative process, probably toxic in character, though why it should exercise so local a selection is a mystery.

FIG. 12.—Apophysitis of the calcaneus in a boy aged 10. The epiphysis shows characteristic irregular ossification.

The condition need cause no alarm; it responds to counter-irritation, raising of the boot heel to relax the tendo Achillis, rest, and the elimination of any undue degree of local pressure.

Calcaneal Bursitis.

The other case in this group illustrates a different explanation of somewhat similar symptoms. The patient complains of pain over the back of the heel, with recurrent cramp of the calf muscles and the appearance from time to time of a tender swelling at the point from which the pain seems to originate. An *x*-ray examination yields negative results. On investigation it is found that there is an area of local tenderness over the upper part of the posterior aspect of the heel, and it may be possible to detect a localized swelling at the point of tenderness. The case is one of inflammation of the calcaneus bursa. The anatomical bursa lies between the tendo Achillis and the posterior surface of the calcaneus, but an adventitious bursa frequently arises in a subcutaneous position and immediately overlying the point of insertion of the tendon. Both bursae, but particularly the latter, are liable to irritation by ill-fitting shoes, and, if the overlying skin becomes blistered or broken, a lymphatic infection of the bursal space ensues.

Attention to the footwear may be all that is required to remedy the error, but, if a definite infection of the bursa is established, it is wiser to remove the sac under local anaesthesia and thereafter to take precautions against recurrence of the irritation.

PLACENTA PRAEVIA AND ITS RESULTING FOETAL MORTALITY.

BY

F. NEON REYNOLDS, F.R.C.S.ED.

IT appears from statistics that placenta praevia is found about once in every 500 cases, and is most common in women who have had many pregnancies, especially if these have occurred in rapid succession. Little is known of the etiology of the condition, but two theories have been put forward:

1. The ovum may be implanted from the beginning in the lower uterine segment and the placenta formed, as usual, from the decidua basalis. It is not known why the ovum becomes attached to the lower segment; it may be due to a deficiency in the ordinary properties of the chorionic villi or to some condition of the decidua, such as previous inflammatory changes, which render it unsuitable for implantation.

2. The ovum may be implanted in the upper segment in the usual way, but the villi of the decidua capsularis proliferate instead of undergoing atrophy, and invade the decidua vera of the lower segment after contact has been brought about by growth of the ovum. Then proliferation of the villi of the decidua capsularis would form part of the placenta in the lower segment.

PATHOLOGY.

The placenta is usually larger, more degenerated, and contains more infarcts than normal. These changes may be accounted for by the fact that it can obtain only a comparatively poor blood supply. The cord often has its insertion at the margin. The lower segment and the cervix are generally thicker than usual and more vascular; they do not dilate as easily, and tear more readily. The haemorrhage, which is the chief symptom, comes from the maternal blood vessels, which are opened by the separation of the placenta when the cervix dilates. There is no foetal haemorrhage unless the placenta is torn by manipulation in treatment.

VARIETIES.

There are two varieties of placenta praevia: (1) Complete, in which the placenta entirely covers the internal os. (2) Incomplete, in which the placenta does not cover the os. Of this variety there are two types: (*a*) in which the placenta partly covers the internal os so that it can be felt by the examining finger through the os; (*b*) in which the placenta is situated in the lower uterine segment but does not come as low as the internal os, and therefore cannot be felt unless examination be made above this level.

The terms "central," "marginal," and "lateral" are also used to denote these three degrees. It must be remembered that a placenta which appears to be central when the os admits one finger may be marginal when the os is further dilated.

SYMPTOMS.

Haemorrhage is the only symptom, and usually takes place during the last four weeks of pregnancy; it may, however, occur at any stage. It is not necessarily accompanied by labour pains, being caused in some cases by painless contractions which open the os. The bleeding may start as small repeated losses or as a severe and alarming haemorrhage, but is always intermittent. There is sometimes a history of trauma or somewhat strenuous exercise, but commonly no apparent cause is present to determine the onset. There is no pain apart from possible labour pains, and on palpation no tenderness of the uterus is noticeable. Foetal parts are felt as usual, and there is no alteration in the normal tension of the uterus.

DIAGNOSIS.

The diagnosis may be considered in two stages: first, before there has been any haemorrhage, and secondly, after the onset of haemorrhage, the latter being the stage at which placenta praevia is usually diagnosed.

Before the Onset of Haemorrhage.

All cases of pregnancy should be examined particularly carefully during the last few weeks, as it is during this period that the abnormalities, such as placenta praevia, can be discovered or suspected. The signs which might excite suspicion of the presence of this condition are:

(1) *On abdominal examination*: (*a*) Abnormal lie of the foetus. There may be a transverse lie, or the head may be felt very high up, perhaps lying in one or the other iliac fossa. (*b*) An unusually loud souffle heard over the pubic region.

(2) *On vaginal examination*: Difficulty in reaching the presenting part or feeling it in one fornix but not in another, or failing to feel any presenting part at all. Inability to push the presenting part into the pelvis in spite of normal pelvic measurements, and the fact that the promontory of the sacrum cannot be felt, or that there have been previous confinements without trouble. The feeling of a soft, boggy mass filling all or part of the fornices. This, once experienced, is not likely to be confounded with a breech presentation or hydatidiform mole, in both of which conditions there are other definite guiding signs.

If the diagnosis can be made at this stage, or the condition be suspected, precautions can be taken and arrangements made to institute prompt treatment in what is one of the most serious complications of pregnancy.

After the Onset of Haemorrhage.

This resolves itself into the differential diagnosis of antepartum haemorrhage; we have to distinguish between placenta praevia and accidental haemorrhage. The only definite sign of a placenta praevia is feeling the placenta through the partially dilated os. In attempting to do this it must be remembered that the edge of an incomplete placenta praevia may be some distance from the os, and no case should be labelled as one of accidental haemorrhage without a thorough examination. In this connexion I would urge the use of an anaesthetic in all but those cases which can be examined without straining, and in which the placenta is felt immediately upon introducing the finger into the os. Under an anaesthetic the examination can be made carefully and completely with less risk of trauma, which would increase the haemorrhage, and less risk of introducing infection—a further consideration of very great importance. Supporting evidence will be found in those signs which have been mentioned under the heading of diagnosis before the onset of haemorrhage.

In accidental haemorrhage the foregoing evidence is lacking except in those rare cases in which placenta praevia and concealed accidental haemorrhage are present together. We must not be misled by the presence of blood clot in the vagina or cervix; this should be carefully cleared out, with the help of a douche if necessary, and further examination made. The bleeding in accidental haemorrhage is steady and continuous. In a case of mixed external and concealed accidental haemorrhage the presence of pain apart from uterine contractions, tenderness on palpation, and increased tension of the uterus, together with the general condition of the patient, are sufficient to distinguish the condition.

To summarize these points:

Placenta Praevia.	*Accidental Haemorrhage.*
No pain.	Pain (concealed variety).
Uterus flaccid except during contractions.	Uterus not relaxed between contractions (concealed).
Uterus not tender to palpation.	Uterus tender to palpation (concealed).
Haemorrhage intermittent.	Haemorrhage continuous.
Presenting part felt only partially or not at all.	Presenting part felt normally.
Placenta felt per vaginam.	No placenta felt per vaginam.
Malpresentations common.	Malpresentations not specially associated.
Not commonly associated with toxaemias.	Commonly associated with toxaemias.

Hydatidiform mole with haemorrhage, and in which the mole can be felt through the os, may be confused with placenta praevia. In this, however, we have to guide us the size of the uterus, which is greater than it should be for the supposed period of pregnancy, and the absence of any foetal parts. Two other conditions which must be borne in mind are bleeding from a cervical polypus or from a carcinoma of the cervix. Both of these are generally easily discovered if careful examination is made.

TREATMENT.

This is by far the most difficult problem presented by placenta praevia. Each case must be carefully examined in all detail, and no hard-and-fast rules can be laid down. Certain lines of treatment are open to us.

1. Leaving alone.
2. Rupturing the membranes.
3. Rupturing the membranes and plugging the vagina.
4. Version and bringing down a leg.
5. Insertion of a de Ribes's bag.
6. Caesarean section.

All these methods have as their object control of the haemorrhage and the safe delivery of the patient. Choice of them can only be made after a careful study of the following points.

Condition, age, and parity of the patient.
Type of placenta praevia to be dealt with.
Period of gestation and condition of the infant.
Stage of labour—that is, degree of dilatation when the diagnosis is made.
Conditions under which treatment has to be carried out.

If the patient is fit and not yet affected by loss of blood any of these methods may be considered; if, however, we have to deal with a shocked, exsanguinated patient, our first consideration must be to stop the haemorrhage and combat the shock by the quickest and most effective method which does not, in its performance, involve any added strain or exhaustion. The method of choice here is to rupture the membranes, plug the vagina, and apply a tight abdominal binder from above downwards. The shock can then be dealt with by the usual means, and later, when the patient has somewhat recovered, other treatment can be decided upon if necessary. In this connexion the value of blood transfusion, which often may be the measure determining recovery, must not be overlooked. The operation can easily be carried out in the patient's home with simple apparatus; a microscope is not necessary for testing the blood of the donor against that of the recipient, and a complete grouping of both need not be done.

Age and parity are important in the case of the elderly primipara, with little chance of further pregnancies, for whom a living child is very essential. Immediate Caesarean section is then indicated, except in the very mild, incomplete type of case requiring no active intervention. In a multipara with several living children, or a young primipara with plenty of time for further chances, the infant is generally disregarded and treatment directed solely in the interests of the mother. In considering the period of gestation and the condition of the child it is obvious that in a very premature labour, or if the child is already dead, the mother is again the only consideration.

The type of placenta praevia is important; in the complete or central type Caesarean section should always be performed, provided the child is alive. The nearer the approach to the lateral type the more effective will be the natural force of labour in controlling the haemorrhage.

The stage of labour—that is, the amount of dilatation of the os when the diagnosis is made—has a direct bearing upon the treatment, since the less the dilatation the more difficult and dangerous to the patient is any form of treatment involving manipulation through the os. Therefore, with a dilatation of less than two fingers, rupturing the membranes and plugging the vagina is generally indicated (subject to the other conditions being satisfied), even if only as a preliminary to other procedures. With a dilatation of two fingers or upwards there is the choice of version and pulling down a leg or the insertion of a de Ribes's bag.

The question of the conditions under which treatment is to be carried out is one upon which there can be very little difference of opinion. Every case of placenta praevia, unless so slight that no treatment, beyond perhaps simple rupture of the membranes, is required, should be treated in hospital or a nursing home unless the patient's home allows facilities equal to those afforded by such institutions. The most difficult and important part of any form

of treatment is the prevention of sepsis; such undertakings as plugging the uterus cannot be carried out efficiently and with a minimum risk of subsequent sepsis unless conditions conform to a standard which is seldom available in patients' homes.

Having considered these factors which guide us in the choice of treatment we can now take the individual methods and see in what type of case each one is indicated. We can leave alone the very slight case with an occasional small haemorrhage, provided that the labour is not prolonged sufficiently for the patient to be affected by the repeated slight losses. Many such cases are diagnosed as accidental haemorrhage, but it is more probable that they are due to a low placenta.

Rupturing the membranes is sufficient in the milder cases of the lateral type in which labour has begun, and also in those cases in which there is no serious loss until the os is more than half dilated. If the membranes are then ruptured the presenting part can be pushed well down and a binder applied with good control of the haemorrhage. It must be remembered that rupturing the membranes is not a reliable method of inducing labour, and for that reason should not be used alone in the absence of good uterine contraction.

Rupturing the membranes, plugging the vagina, and applying a tighter binder is indicated in the incomplete type of moderate severity with dilatation of less than two fingers, in cases in which labour has not begun, and in all cases in which the condition of the patient, from shock and loss of blood, is too bad to admit of any more extensive treatment. It must be remembered that, to be effective, the plugging must be carried out very carefully, if possible under an anaesthetic and with the aid of a speculum; it must start well back, and care must be taken that the plugging is placed behind the cervix to start with, and does not merely push the cervix backwards. If not carried out efficiently haemorrhage will continue above the plug. The danger of sepsis following this procedure cannot be too strongly emphasized, and the plug should always be removed as soon as possible. This method should, in fact, be looked upon only as a preliminary to other treatment in the severe cases, or as a means of inducing uterine contractions.

Version and pulling down a leg is a sure and fairly safe method of immediately controlling the haemorrhage in cases of the incomplete type with severe bleeding, or in the central type seen too late for Caesarean section. It almost invariably results in good contractions and subsequent delivery without further intervention. It is always indicated in the case of a small or premature foetus with a vertex presentation and in transverse lies. Breech presentation should be treated by bringing down a leg. Version should always be by the external method where possible; this will give a minimum of trauma and of risk of sepsis. Once the breech is down, a leg can be seized with very little manipulation. It should not be persisted in if found very difficult, and should never be carried out if there is any disparity in size between foetal head and pelvis.

De Ribes's bag can be used instead of the half-breech; it can be introduced with less dilatation than is required for pulling down a leg; it is effective in controlling the haemorrhage, and gives a better chance of a living child. There are, however, very definite disadvantages. It is not such a good stimulus to labour, and it may dilate the os without producing labour pains, especially if traction is used. Thus there is considerable risk of a severe and sudden haemorrhage when the bag is expelled into the vagina. This will necessitate further procedure to get the presenting part down in order to maintain controlling pressure. The presenting part may be displaced by the bag and an oblique lie result; the bag perishes easily, is not always available in an emergency, and is a ready means of introducing sepsis.

One other method of this type must be mentioned—namely, traction from Willet's forceps applied to the foetal scalp. Good results have been obtained, and it causes surprisingly little damage to the child other than a cephalhaematoma.

Caesarean Section.

The use of Caesarean section in placenta praevia is a much-discussed question, and one upon which unanimity of opinion is seldom found. Certain cases, however, definitely require this method of treatment.

1. All cases of the complete, or central, type if the condition of the mother allows it.

2. Cases in which the birth of a living child is of great importance—for example, in elderly primiparae.

3. Cases in which there is any mechanical obstruction to delivery, such as a rigid cervix or disproportion between the size of the child's head and the pelvis, however slight. (It can be understood that the extra difficulty produced by such complications might be just too much for a patient who has undergone a somewhat prolonged labour and is weakened by loss of blood.)

4. Cases complicated by toxaemia or constitutional conditions, such as cardiac disease, which require the labour to be as short and as easy as possible.

5. Cases of twin pregnancy.

In considering this method of treatment the conditions under which it has to be applied are all-important. Carried out in suitable surroundings by one accustomed to the operation it has the advantage of being a fairly safe means of terminating a condition which seriously threatens the life of the mother; also it gives the best chance of a living child, and its performance is not affected by such conditions as an abnormally large child or comparative pelvic contraction, which increase the difficulties of the other methods. The disadvantage lies chiefly in the potential weakness of the uterine scar and its behaviour in subsequent pregnancies. This is a point to which I shall refer again later.

DANGERS OF PLACENTA PRAEVIA.

There are certain dangers which have to be faced in placenta praevia no matter which particular treatment is used.

1. *Post-partum Haemorrhage from the Lower Uterine Segment.*—This is due to the relatively poor power of contraction possessed by the lower segment, and the consequent failure to occlude the large sinuses opened up by the separation of the placenta. This haemorrhage must be treated by the usual means, such as compression, packing, and drugs. It may be necessary, in cases in which Caesarean section has been performed, to remove the uterus, but this is generally only called for when the whole uterus is soft and flabby, and cannot be made to contract. Treatment of such a case by Caesarean section facilitates control of the haemorrhage, as with the abdomen open direct pressure can be applied and the uterine arteries compressed.

2. *Rupture of the Lower Segment.*—In normal cases the lower segment is much thinner, more friable, and less elastic than the upper, and this is still more marked at the site of implantation of the placenta. For this reason all manipulations must be carried out with the greatest possible care, especially such procedures as version or the application of forceps, which may be necessary after the expulsion of a de Ribes's bag. It is an accident which is very sudden in occurrence, and is almost always fatal.

3. *Sepsis.*—The placental site is close to the vagina, which is never sterile; it is therefore very easily infected during examination or manipulations, or subsequently during the puerperium. In addition, the resistance of the patient is lowered in proportion to the amount of blood which has been lost.

PROGNOSIS.

The outlook for the mother depends very largely upon how soon the diagnosis is made. Many fatalities are due to the occurrence of severe haemorrhage, or to the introduction of sepsis before the true condition is appreciated and efficient treatment instituted. In arriving at a prognosis the presence or absence of uterine contractions must be considered. A well-contracting uterus means a healthy one, not yet weakened by excessive loss of blood, and is

an indication that the patient is still in a fair condition to withstand the severe demands to be made upon her.

The cause of death is haemorrhage, either ante-partum or post-partum, shock from manipulation or instrumental delivery, sepsis, or such tragic accidents as rupture of the lower segment or pulmonary embolism, the last of which is, perhaps, specially liable to occur in this condition. The maternal mortality may be taken as about 5 to 6 per cent. The figure given by Queen Charlotte's Hospital[1] in a series of 308 cases is 5.5 per cent., taking all methods of treatment together. It is interesting to look at the results of the individual methods.

	Cases.	Per cent.
Spontaneous delivery	62	..... 6.4
Vaginal plugging	53	..... 1.9
De Ribes's bag	38	..... 7.9
Version and bringing down a leg ...	101	..... 6.0
Caesarean section	54	..... 5.5

From this it will be seen that the lowest mortality is from vaginal plugging; but it must be remembered that this method is sufficient only in the treatment of the milder cases of the lateral type, especially those in which haemorrhage is controlled with the onset of labour. The next lowest is from Caesarean section, the method used in cases of the central type.

The outlook for the child is uniformly bad; a large number are stillborn, and many die shortly after birth. The causes of death are asphyxia from placenta separation, haemorrhage from laceration of the placenta, pressure on the cord, and prematurity. The figure from the series of Queen Charlotte's Hospital is 59 per cent. Taking the different methods individually we get:

Spontaneous delivery	43.5 per cent.
Vaginal plugging	58.5 ,,
De Ribes's bag	57.0 ,,
Version and bringing down a leg	78.0 ,,
Caesarean section	42.6 ,,

Version and bringing down a leg, which was decided upon in this series 101 times—nearly twice as often as any other method—gives the appalling foetal mortality of 78 per cent. It appears from this large series of cases, which may be taken as fairly representative of present-day results, that in the commonest type of placenta praevia, under up-to-date treatment, we get a maternal mortality of 6 per cent. and a foetal mortality of 78 per cent.

I have given an outline of what appear to be the generally accepted views upon the treatment of this condition. These views, in spite of occasional sporadic and individual criticisms and many discussions, have been held for many years, and there has been very little improvement in results. The general feeling among obstetricians is one of dissatisfaction. No one should be satisfied with a foetal mortality of nearly 80 per cent. I can think of no other condition in which this figure is even approached. It is true that the mother must always be the first consideration, but equally the child does or should matter. A treatment is required which lowers the foetal mortality and at the same time decreases, or at all events does not increase, the maternal mortality.

I should like to make a plea for the wider use of Caesarean section in those cases of placenta praevia which would otherwise require plugging, version, or a de Ribes's bag. It is certain that, provided the diagnosis be made sufficiently early, this method would considerably diminish the foetal mortality without detriment to the chances of the mother. Many men of repute have put forward the same plea, but without success.

Blair Bell[2] in 1920 said: "I am certain that Caesarean section is the proper treatment in a large majority of cases. . . . I am, indeed, convinced that Caesarean section affords no more danger to the mother than version and delivery per vias naturales. Those who still hold to version as the treatment of election must therefore justify their indifference to the fate of the child."

Herbert Spencer[3] considered that Caesarean section was rarely indicated, and gave as his reasons that after version the mother could have children with safety, which was not the case after Caesarean section, and that the child, owing to its prematurity, would often succumb. This second objection can surely be dismissed at once; no one would advocate this treatment, except on very special grounds, in a case in which the child was so premature as to make its survival a matter of doubt.

Jellett,[4] in 1925, made a vigorous reply to a plea for Caesarean section put forward by Watson and Miller.[5] He cited a low maternal death rate, under 6 per cent., and referred to the fact that treatment had not altered for nearly thirty years, suggesting that this was due to the generally satisfactory results obtained. He completely ignored the child's claim for consideration.

Let us now see what are the disadvantages and dangers of Caesarean section. At the time of operation the condition of the patient must be taken into account, together with the risk of haemorrhage and sepsis, all of which are also serious considerations in any other method. If the diagnosis can be made sufficiently early there is less shock, less risk of haemorrhage or sepsis in Caesarean section than in any other form of treatment. It is, however, to the later effects that Spencer was referring when he said that the mother could not usually have subsequent children in safety. The general mortality of the operation performed under suitable conditions and not in extreme emergency is probably not higher than 2 or 3 per cent., so that from this point of view the maternal mortality would not be increased. The danger of the rupture of the uterine scar in subsequent pregnancies is the most grave objection to be considered. Eardley Holland, who in 1920 made a thorough investigation into this question, gives 4 per cent. as the frequency of rupture of the scar. Other figures are those of Munro Kerr[6] 1.8 per cent., and Couvelaire[7] 2 per cent. We can, however, take the conclusions come to by Eardley Holland[8] upon the largest number of cases ever investigated in this connexion to prove that this risk can be reduced. The cause of ruptured scar is imperfect healing leading to a thin scar, in which muscular union has failed. Factors leading to this imperfect healing are infection of the uterine wound and unsuitable methods and material in suturing the uterine incison. Eardley Holland found that the incidence of rupture was far greater when catgut was used to suture the uterus than when the suture material was silk or silkworm-gut, and he advocates the regular use of the latter material.

The operation is not difficult, but it is too often carried out in an atmosphere of hurry. Remarks to the effect that the whole operation took only twelve minutes should be regarded as inviting criticism rather than congratulation. There is no need for any undue haste, especially after the child has been delivered; very rare indeed are the cases in which an extra few minutes will affect the patient adversely, and the utilization of those few minutes in obtaining good contraction of the uterus and careful, accurate suturing will be amply repaid by the results, both immediate and remote. In the light of modern knowledge, with improved methods and material, and with more regard to the technique of asepsis, the risk of rupture of the uterine scar can surely be very considerably reduced.

Conclusions.

1. The question of foetal mortality in placenta praevia is worthy of serious consideration.

2. Wider use of Caesarean section can reduce this mortality without increasing the risk to the mother.

3. This method has never been tried upon a sufficient number of suitably selected cases for a correct estimate of its value to be made.

4. The usual objections to this method of treatment can be largely discounted when the operation is performed by the modern technique and under suitable conditions.

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AN INVESTIGATION OF THE END-RESULTS OF COLLES'S FRACTURES.

BY

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THE following account is based on the examination of about 50 cases of Colles's fracture sustained at least two years previous to our examination, in an endeavour to ascertain the causes for the imperfect results that obtain from the usual methods of treatment at present adopted. Our investigation was made on different lines from those of Edwards and Clayton, whose interesting analysis of 424 fractures of the lower end of the radius in adults appears in the *British Medical Journal* for January 12th (p. 61), but we feel that this account may be of value, particularly when compared with theirs.

In each case investigated the original *x*-ray plates were obtained when possible and the out-patient card traced. On re-examination the following observations were made: (1) Range of movement compared with the uninjured wrist. (2) Localized areas of tenderness. (3) Symptoms complained of by the patient. (4) Deformity. (5) Functional result—patient's own opinion.

The accompanying table, indicating the results in the first 20 cases, is quite typical.

Table showing the End-results in Twenty Cases of Colles's Fracture Treated by the Usual Methods.

Initials.	Disp. of orig. fract.	Flexion.		Dorsi-flexion		Radial dev.	Ost. arthr. inf. R.U. jt.	Pain.	Result.
		F.	N.	F.	N.				
J. C.	– N.R.	75	85	70	70	–	(++)	++	Fair.
M. C.	– N.R.	75	90	80	80	+	–	++	Poor.
W. K.	+ R.G.	80	85	70	75	–	–	(+)	Good.
A. H.	++ N R.	0	80	0	70	+	++	+++	Bad.
M. W.	+ N R.	60	85	80	80	+	–	–	Good.
M. M.	– N.R.	Full		Full		(+)	–	–	Good.
S. K.	– N.R.	Full		Full		–	–	–	Good.
J. D.	– N.R.	30	80	80	80	–	–	–	Good.
E. S.	+ R.G.	60	80	80	80	–	–	(+)	Good.
M. T.	– N.R.	Full		Full		–	++	++	Fair.
M. W.	+ R.G.	40	80	75	85	–	+	++	Fair.
S. K.	– N R.	Full		Full		–	–	–	Good.
E. W.	– N.R.	30	75	Full		–	–	–	Good.
H. R.	+ N.R.	30	60	60	60	–	+++	+++	Bad.
S. G.	– N.R.	Full		Full		–	–	–	Good.
L. W.	– N.R.	Full		Full		–	–	–	Good.
A. O.	– N.R.	Full		Full		–	–	–	Good.
S. W.	++ R G.	0	70	20	70	++	+++	+++	Bad.
A. C.	++ R.G.	50	80	60	70	+	++	+++	Bad.
E. J.	– N.R.	60	70	75	75	–	–	–	Good.

Disp. of orig. fract. = Displacement of original fracture. N.R. = No reduction. R.G. = Reduced with gas. In columns 3 and 4, F. = Fractured, and N. = Uninjured wrist. O-t. arthr. inf. R.U. jt. = Osteo-arthritis in inferior radio-ulnar joint. Radial dev. = Radial deviation.

From this table it is seen that the results were good in 60 per cent. of cases, fair in 15 per cent., poor in 5 per cent., and bad in 20 per cent. The proportion of good results (60 per cent.) would appear quite satisfactory, but it is interesting to compare those fractures in which there was little or no displacement with those in which displacement was a marked feature; thus:

Without displacement	12=60 per cent.
With displacement	8=40 „

It is seen, therefore, that, as would be expected, uniformly good results obtain where no displacement had occurred, but of the remaining cases 50 per cent. are bad, 12½ per cent. poor, and 37½ per cent. fair.

From our investigation it would appear that the results of Colles's fractures with any displacement will in two years be bad in half the cases and unsatisfactory in the remainder. In our series not one result could be described as good, the majority were thoroughly bad.

It is reasonably assumed, where existing displacement of the fragments of a fracture has been reduced and good anatomical apposition restored, that, provided no comminution has occurred, the functional result would be satisfactory, in the same way that a simple fracture without displacement provides a perfect functional result. Our attention was therefore directed to this factor—incomplete or imperfect reduction—as a predisposing cause of bad results.

FIG. 1.—Old Colles's fracture with marked radial deviation and displacement. Ununited fracture of the styloid process of the ulna.

In case A. H., the fourth in our series, the apparent displacements of the distal radial fragment are (1) backward rotation, (2) radial deviation and rotation. The effect of these displacements is manifest in the inferior radio-ulnar joint, which becomes the seat of marked osteo-arthritis. It will be observed that the articular surfaces are at an angle as seen in the antero-posterior view (Fig. 1), and are markedly out of alignment in the lateral plane. The case of S. W., the eighteenth in our series, was identical, and showed marked unreduced radial deviation with consequent arthritis. Both of these patients were unable to use their wrists or perform any manual work;

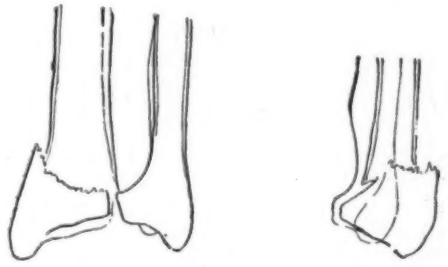

FIG. 2.—Case of S. W. Tracings of *x*-ray photographs taken at time of injury (August 19th, 1924), showing uncorrected radial displacement and backward displacement.

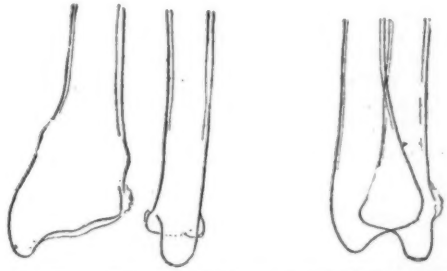

FIG. 3.—Case of S. W. Tracings of *x*-ray photographs taken November 17th, 1926, more than two years later, showing radial displacement and backward rotation of distal radial fragment. Advanced osteo-arthritis in radio-ulnar joint.

they represent the most unsatisfactory result of inadequate treatment and imperfect reduction. In every bad case it was possible to demonstrate osteo-arthritis by *x*-ray examination as in these two cases, and care was taken to exclude those in whom generalized arthritis was present in other joints.

Tracings of the plates of S. W. taken on August 19th, 1924, are reproduced for comparison with those of November 17th, 1926 (Figs. 2 and 3), and it is seen that (1) the radial displacement has not been reduced; (2) the backward rotation has been reduced without previous disimpaction, with the result that the backward displacement persists. It will be seen that the backward rotation is,

however, still present in the *x*-ray photographs taken on November 17th, 1926, showing that disimpaction must be obtained before any attempt at reduction is made, and that immobilization was not sufficiently prolonged.

The concomitant fracture of the styloid process of the ulna, so frequently seen in association with Colles's fracture, remains ununited in approximately 50 per cent. of cases; but it was found in this investigation that, contrary to the usual teaching, no symptoms or pain arise from this injury in the event of non-union. No case in our series exhibited symptoms that could be definitely attributed to non-union of the ulnar styloid, and we agree with Edwards and Clayton that fracture of this bone makes no difference to the end-result.

From this early review of our results (our investigation is not complete) the causes of imperfect function of the wrist after a Colles's fracture would appear to be (1) backward rotation of the distal radial fragment; (2) radial deviation and displacement of the distal radial fragment. As the most usual complaint was of pain, it was found difficult to decide how much disability could be attributed to weakness of the wrist due to loss of mechanical efficiency of the flexor tendons when the backward tilting of the radial fragment is uncorrected. In most cases the pain from arthritis in the inferior radio-ulnar joint was sufficient to render the wrist useless and "apparently" weak, but in all cases it was possible to demonstrate well-marked arthritis where the fragments had not been restored to perfect anatomical apposition. For this reason, whatever the immediate result of treatment, the most important cause of bad results would appear to be osteo-arthritis ensuing as an ultimate sequel to imperfect anatomical restoration of the fragments, and this necessitates reduction of both the backward displacement and the radial deviation and displacement.

TREATMENT.

In undertaking the treatment of Colles's fractures every effort should be made to restore complete anatomical position of the fragments, which we believe can only be obtained by complete disimpaction of the fragments before manipulation and by immobilization for a longer period than at present advised.

Choice of Anaesthetic.—Although the majority of cases are reduced under gas anaesthesia, complete relaxation is seldom obtained, and when possible a general anaesthetic is very much to be preferred. We feel that many imperfect results follow the rapid, incomplete manipulation necessitated by a short "gas" anaesthetic.

Manipulation.—Complete disimpaction of the fragments is essential before any attempt at manipulation is made. The method advocated by Sir Robert Jones is adopted, and manipulation is continued until free movement is permissible between the fragments. Reduction of the deformity is then obtained, with restoration of the true anatomical apposition. It is at this stage that a general anaesthetic is preferable to gas, as adequate time can then be taken for the application of the splints—a most important part of the treatment. It is possible to obtain an excellent reduction of the fracture with short anaesthesia, but if the patient commences to struggle before the splints have been applied—a frequent occurrence with gas anaesthesia—the deformity may readily be reproduced, or the operator contents himself with a "satisfactory" instead of a "perfect" reduction.

Splints.—The diversity of splints that have appeared for the treatment of this particular fracture testifies to the difficulty in obtaining a really satisfactory splint which will suit every case. Carr's splint is almost universally adopted as the routine splint, but is not suitable for every case. The practice of maintaining the wrist in a fully flexed position for twenty-four hours we believe to be unsatisfactory, and does not fulfil the important function of keeping the fragments in position, as has been claimed for it. The many special splints invented are too expensive and complex for routine treatment. Since commencing this study we have made use of two common splints—the anterior angular splint in conjunction with a straight back splint, both made of wood, simple in construction, and usually readily obtained. This method of splinting Colles's fractures is similar to that described by Scudder, but we prefer an anterior angular splint to the straight splint he uses. It is, of course, too early to be dogmatic about this method of treatment, but our results have been encouraging enough to prompt us to offer the method as a suggestion for others who may adopt it and give it a trial. We claim no originality, as the method is fully described by Scudder; rather we would revive this simple and efficient method, which is as follows:

An anterior angular splint is chosen so that when lightly padded it will extend to the ball of the thumb. The straight posterior splint should be long enough to extend from the elbow to the metacarpo-phalangeal joint. Each splint is padded separately for each case with a single layer of wool, and in the posterior splint a pad of wool is placed so that it will rest immediately below the distal radial fragment. The anterior splint is similarly stuffed with a pad of wool placed so that it will rest opposite the lower end of the proximal radial fragment, and, in addition, is padded so that it will fit the

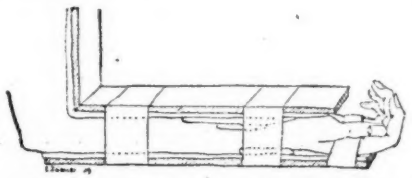

FIG. 4.—Diagram illustrating method of application of splints and strapping in suggested form of treatment for Colles's fracture.

contour of the front of the forearm. It is to be noticed that the back of the forearm is quite straight when the forearm is supinated. The posterior splint is applied first with the forearm supinated, and the anterior splint follows, the fracture being as it were squeezed between the splints. Three strips of strapping are next applied, the first round both splints immediately over the fracture, the second in front of the elbow, also around both splints, and the third across the palm of the hand, fixing the hand to the posterior splint but allowing free movements of the fingers. The strapping should not be applied too tightly on account of the subsequent swelling which invariably occurs, and when applied pressing the splints together should render them slack. The forearm is then fully supinated and the whole firmly bandaged. By this means the fragments are securely immobilized and a good position maintained, and the fingers are free to commence active movements from the first. In addition, the hand may be fixed in adduction to overcome the radial deviation by the third piece of strapping. The arm is supported in a sling. The patient is seen the next day, and if there is any swelling the splints are carefully reapplied, the patient being encouraged to move the fingers as much as possible. The splints are not removed permanently for a week, after which massage and gentle movements are instituted, but this period between the injury and the commencement of massage will vary with individual cases. The advantages of this method are that the splints are comfortable in spite of the position of supination, and the position of the fragments is maintained, also that the method can be applied to every case, including the severely comminuted fracture and T-shaped fractures, both of which seem to do well when immobilized in supination.

CONCLUSIONS.

1. Colles's fractures without displacement yield uniformly good results, as observed two years after the injury.

2. Where displacement was a marked feature of the fracture the results two years after the injury are invariably unsatisfactory.

3. The disability was in each case due to osteo-arthritis in the inferior radio-ulnar joint, resulting from incomplete reduction of the fracture.

4. Non-union of the fractured ulnar styloid process does not affect the functional result.

5. Emphasis is laid upon restoration of anatomical apposition as important in the treatment, and a method of splinting is suggested.

We wish to thank Mr. E. G. Slesinger for permission to make use of the records of the fracture department of Guy's Hospital for this investigation, and for his kindly interest and helpful suggestions.

APHONIA AND HOARSENESS.*

BY

C. A. SCOTT RIDOUT, M.S., F.R.C.S.

I PROPOSE to make some observations on aphonia and hoarseness arising acutely. All of us are familiar with the sudden aphonia in a child or adult who has contracted a common cold associated with laryngitis; or with the croupy hoarseness, sometimes manifested instead, which generally yields to simple remedies. Now and again, however, especially in certain epidemics of so-called influenza, we come across cases not so simple in type which are associated with considerable oedema of the fauces and pharynx. In some of these cases oedema spreads to the arytenoids, which become so swollen as to resemble almost a pair of nasal polypi; the symptoms may become alarming and the aphonia may be associated with definite dyspnoea. The condition may be severe enough to necessitate laryngotomy or tracheotomy, though, as a rule, it yields rapidly to local scarification with a laryngeal knife. Should, however, the patient's condition then be too severe to permit of the necessary manipulation, laryngotomy must be performed at once. It is dangerous to impose on the heart, already toxic from the general infection, the strain of a battle against laryngeal obstruction, once this is producing a rising pulse, recession, and duskiness. At this point, furthermore, one might mention the possibility of an unsuspected diphtherial infection and urge that, however desperate the case may seem, tracheotomy may be performed just in time to save life. A few years ago I was asked by a medical friend to come at once and see a lad who was desperately ill with some respiratory obstruction so extreme that my friend did not think I would suggest doing anything. I found a lad of about 8 years of age, voiceless, livid, gasping, with marked recession of chest and neck, a feeble rapid pulse, and obviously in the last stages of laryngeal obstruction. Immediate tracheotomy at once changed the picture, and on investigation several of his school-mates were found to be carriers of diphtherial infection.

Simple Acute Aphonia.

Simple acute aphonia may persist when other signs and symptoms have passed off. The patient is generally a female aged 15 to 35; her cords are pearly white, perhaps slightly coated with mucus, but they do not approximate well; otherwise the patient is quite fit. I always hesitate to call a condition hysterical or neurotic on one examination, but if the patient, as often happens, can be made to say "E" quite well when the tongue is held out and the laryngeal mirror applied to the palate, or can be made to sing the vowels, the presumption is that the case is one of hysterical aphonia. It is necessary, however, to have repeated examinations until the patient has recovered, though as the patient has literally forgotten how to talk, this may take some time. Encouragement, suggestion, valerian, and faradism generally relieve the symptoms.

The aphonia, however, may not pass off so satisfactorily, and careful re-examination after two or three weeks is then essential. In this type of case the cords remain red or pink, slightly roughened or even granular, or the reddening may be unilateral without definite ulceration or swelling. The diagnosis of such cases presents perplexing problems, as the following will show:

A man of late middle age had what his doctor thought was an influenzal attack followed by hoarseness and loss of voice. On examination I found definite injection of the right vocal cord, with a little on the left; there was no loss of movement and no ulceration. I prescribed rest to the voice and steaming, but when I saw the patient again a week or ten days later the picture had changed. The right cord was now covered with pinkish granulations, the left was practically clear, but movements were still unimpaired. In the absence of chest signs I was still of opinion that the condition was post-influenzal, and probably of streptococcal origin. It was, however, thought expedient to obtain a further opinion, so we sent him to a leading laryngologist, who thought that the condition was either tubercle or early carcinoma, and advised punching out a portion of the cord for pathological examination. This operation the patient refused, and as he has since been perfectly well I believe that the original diagnosis was probably correct.

Streptococcal Laryngitis.

Other cases, however, do not end so happily. There are some with the same sort of history, but on examination a little shallow irregularity is noticed in the posterior half of either cord, perhaps very limited in extent and looking like a mouse nibble. The rest of the larynx may be slightly congested or the epiglottis may be very pale; there may be no arytenoid swelling, and movements may appear good. Alternatively the irregularity may take the form of a small definite ulceration with marked surrounding inflammation. Perhaps in the first variety careful examination of the chest will reveal pulmonary lesions, and a swab from the larynx itself show the presence of tubercle bacilli. In the second variety one may find only streptococci, though again pulmonary crepitations may be present. Even in the absence of tubercle bacilli one cannot say definitely that the case is not one of tuberculosis, though there are undoubtedly cases of streptococcal laryngitis with ulceration and even streptococcal pulmonary lesions, which simulate tubercle, especially among children. In any case treatment should follow a definite course: absolute silence must be enjoined, septic foci, such as carious teeth, septic tonsils and adenoids, removed, infected nasal sinuses cleansed, and if the swab shows chiefly streptococci, a polyvalent anti-streptococcal serum administered.

In a discussion on the question of oral sepsis in relation to lung conditions at the Royal Society of Medicine in January, 1928, I attempted to show by means of a series of cases the great improvement that might be brought about by removal of naso-oral sepsis, especially in children with pulmonary symptoms. One frequently meets cases of repeated attacks of laryngitis in children and adults in which the cause would seem to lie in a tonsil or sinus from which pus flows into the pharnyx and so to the larynx when the patient assumes the recumbent posture at night, and which clear up when the cause is removed. In advanced cases of laryngeal tuberculosis the outlook is desperate, but in one patient in whom the laryngeal condition was much worse than the pulmonary, tracheotomy, by insuring complete vocal rest, effected a cure.

Foreign Body in the Larynx.

So far I have dealt with aphonia and hoarseness apparently arising acutely, and gradually merging into chronic or intermittent forms. Before passing to the really chronic type I would, however, note that in sudden acute aphonia or raucous hoarseness the possibility of a foreign body must not be overlooked.

Many years ago, when I was doing a house appointment, a patient was admitted with a history of aphonia, which followed a violent spasm of coughing, brought on by swallowing a single tooth with a small plate and hook. Examination by indirect laryngoscopy showed the tooth balanced by its hook between the vocal cords, the hook being stuck on the upper surface of the left cord. This was in 1902, and as direct laryngoscopy was then unknown at the hospital an attempt was made to remove the tooth with a pair of laryngeal forceps. As this procedure only caused violent coughing, the patient was sent to the operating theatre for thyrotomy, but administration of the anaesthetic provoked a paroxysm of coughing and expulsion of the tooth.

About four years ago an 11 months infant was brought to me with a history of recurring raucous bronchitis with croupy cough. In the momentary view I was able to obtain by means of indirect laryngoscopy I saw something bright; I suggested a foreign body, and the desirability of administering an anaesthetic. Direct laryngoscopy through Irwin Moore's bronchoscope revealed a safety-pin caught in the right sinus pyriformis alongside the glottis. As the history was of four months' duration there is no doubt that the foreign body had been sucked in, and remained there during that long period.

Excessive Use of Voice.

Excessive use of the voice, common in newspaper boys, badly trained elocutionists, parsons, singers, etc., may manifest itself in permanently thickened congested vocal cords. One is often asked to tide over a difficult period—for example, Easter week—a parson whose voice is failing

*A paper read before the Winchester Division of the British Medical Association, November 21st, 1928

through excessive use or faulty production. It is only fair to warn the patient that further speaking may result in permanent damage to his voice; but if, as generally happens, he decides to carry on, then the best treatment one can suggest is that before speaking the patient should spray the throat with a 1 or 2 per cent. cocaine spray, following this, immediately he has finished, by steaming with menthol or friar's balsam. He may be given a sedative lozenge containing menthol, carbolic, and a little cocaine to suck intermittently, a medicine of strychnine and phosphoric acid to take internally, and advised to swallow a raw egg just before he is to use his voice. When the stress is over one orders complete vocal rest, attends to the condition of the nose, throat, and teeth, and gives advice on the subject of voice production.

The formation of singer's nodules is often accompanied by rapid failure of the patient's voice, or after a while its complete disappearance. These little nodules, whose site is at the junction of the middle and anterior thirds of the vocal cords, are best treated by rest, assisted if possible by cauterization with a pointed electro-cautery—not an easy manœuvre, but in most cases effective. In addition, of course, examination and treatment of conditions in the nose, nasopharynx, and tonsils may be required. These growths tend to disappear spontaneously, and should not be over-treated, though any septic causes should be removed. In adults I have found cauterization a satisfactory procedure.

Papillomata of the Larynx.

Another fairly common cause of aphonia in children and in adults below middle age are papillomata.

A boy of about 6 was brought to me because he could never talk above a low whisper. His condition had several times been diagnosed as laryngitis. On listening to his breathing I heard at every expiration a click, as though something were being driven against the glottis, and this suggested the diagnosis of papilloma. This diagnosis was confirmed by laryngoscopy, which revealed a stalked papilloma attached to the left vocal cord near the anterior commissure.

Only this year a boy aged 3 was sent to me on account of aphonia with some dyspnoea. During examination under an anaesthetic his condition became so bad that tracheotomy had to be performed, and on direct laryngoscopy a broad sessile papilloma was seen covering almost the whole of the glottis and attached to the right vocal cord. This papilloma was picked off piecemeal, the tracheotomy tube being left in for some weeks and then removed. After a few months the growth recurred and the same procedure had to be adopted again, but this time the tube was left in for several months. We are now trying to see what will happen if the tracheotomy wound is allowed to close.

Such cases may take years to get well, but it is quite certain that in children they must not be treated by laryngo-fissure, as this operation may be followed by permanent stricture of the glottis. Intralaryngeal methods and rest by tracheotomy are the treatment. In older patients one may meet a condition of multiple papillomata. In still older patients with recurring papillomata one fears the onset of malignant changes. These occurred in a patient who, after having papillomata removed at intervals of years from the true cords, had to have total laryngectomy performed.

Cancer of the Larynx.

Another variety of aphonia is illustrated in the type of patient, usually middle-aged or older, who complains of increasing hoarseness, probably suffers no pain, and attributes his symptoms to a cold. Examination of the neck reveals no growth or other abnormality, but there is often present advanced oral sepsis. In such cases careful laryngeal examination, if possible after oral sepsis has been treated, is vital, because commonly the cause of the hoarseness is a malignant growth involving a vocal cord or a superior ventricular band or spreading to these structures from the sinus pyriformis. Generally speaking, however, in the latter case there is accompanying pain on swallowing. At the present time I have under my care two cases of the type just described; with symptoms dating back six and nine months respectively. They both present almost inoperable carcinomatous ulceration involving the entire half of the larynx and reaching to the epiglottis.

Intrinsic carcinoma of the larynx, if caught early, is a curable condition.

A retired naval officer was sent to me in 1923 for slight aphonia, of which he had only complained a week or two. Examination showed a growth about the size of a pin's head attached to the under surface of the right vocal cord, the cord itself being freely movable. A portion of the growth punched off for examination proved to be typical carcinoma. I removed the right vocal cord and a small portion of the anterior end of the left cord with their surrounding tissues by window resection of the right ala of the thyroid cartilage, and rapid recovery with formation of scar tissue occurred. After about fifteen months a small pin's head nodule appeared on the middle third of the left cord, and this proved again to be a carcinoma. I performed a similar operation, removing, however, the arytenoid cartilage as well as the whole of the left cord, and uninterrupted recovery occurred. I believe the patient is still perfectly well.

Only early operation prevented this case from running the same course as the two previous ones. I have seen a case of urgent hoarseness with dyspnoea treated for five months as laryngitis, in which the growth had made such rapid strides that the glottis was nearly occluded. One may say that any case of hoarseness or aphonia which does not yield to ordinary measures in a month requires careful laryngeal examination. A cord invaded by a carcinomatous ulcer or growth is not necessarily immobile. If the cord is fixed and immobile we know that the growth is very deep; if it is mobile the growth is early, and operation holds out a prospect of cure. We are on the threshold of further developments in the treatment of this form of cancer. Rose and Harmer have shown many successful cases of intralaryngeal carcinoma treated solely by radium, and I know one patient with extrinsic carcinoma of the larynx who, three or four years ago, seemed doomed to die, but after radium treatment remained alive and well until quite recently.

A patient who consulted me some years ago illustrates a form of chronic hoarseness which may be called para-syphilitic.

He gave a definite history of syphilitic infection, for which he had been treated. His glottis was distorted, and portions of the cords had been destroyed, hypertrophied nodules from the one appearing more or less to fit into the gaps from the other. There was general pharyngeal congestion and hypertrophy of the superior ventricular bands; movements were good. No treatment seemed to be availing, and on account of his occupation the patient could not keep silent. As I regarded the condition as precancerous I took the opinion of a clinical meeting, at which I was advised by some to leave the case alone, and by others to be prepared to operate. I favoured the former view, and have left the case alone. As far as I know the man is still in vigorous health, but I am convinced that he should be kept under observation, as malignant changes are likely to take place.

Another patient with the same symptoms presented himself the other day. There was complete fixation and swelling of the right side of the larynx, though without definite ulceration. The patient's condition was good; there were no enlarged lymphatic glands in the neck, and the Wassermann reaction was positive. The condition is one of syphilitic perichondritis of the thyroid, and the patient is now undergoing anti-syphilitic treatment. At the same time he will be carefully watched, as the combination of malignancy with syphilis is not uncommon.

Laryngeal Paralysis.

Finally, one may consider cases in which laryngeal paralysis results in aphonia or hoarseness. Bilateral paralysis is uncommon, and generally is the result of some severe nervous affection, such as bulbar palsy. Paralysis of one cord, due to intrathoracic growth, aneurysm, or pressure on the recurrent laryngeal nerve from thyroid and oesophageal growths, is often accompanied by no more than weakness of voice. If laryngeal sensation is present the lesion is probably below the larynx. On the other hand, if anaesthesia is present, the possibility of an intracranial lesion or pressure on the vagus nerve must be considered. When a patient suffers from aphonia or weak voice after operation on the thyroid the possibility of trauma must not be overlooked.

ESTIMATION OF HEPATIC EFFICIENCY.

REPORT ON

THE EXPERIMENTAL INVESTIGATION OF A NEW TEST BASED ON THE USE OF SODIUM SALICYLATE.

BY

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ROCH AND SCHIFF (Geneva) in 1921 suggested a new test of hepatic function based on the use of sodium salicylate, and H. Thiers in 1927[1] described a modification of their method. A brief account of this test appeared in the *British Medical Journal*,[2] and the present paper records some experiences with the test, the work having been undertaken on the suggestion of Dr. J. R. Marrack, chemical pathologist of the Hale Clinical Laboratory, as such a simple test—if universally accepted as reliable—would be of great value in diagnosis.

Nature of the Test.

H. Thiers "states that a normal adult can assimilate a dose of 0.04 gram (=3/5 grain) of sodium salicylate, no trace of salicylic acid being found subsequently in the urine. If the liver is damaged salicylic acid appears in the urine passed during the second to the seventh hour after the ingestion of the sodium salicylate." In the preliminary experiments described below the method used by Thiers—namely, extraction of the urine in a flask, and then testing the extract for salicylic acid with dilute ferric chloride—was closely followed, and positive results were obtained with a normal adult. During the later experiments the method of extraction was improved (as shown by the tabulated results) by using a glass-stoppered separating funnel, and it was proved that as much salicylic acid was excreted by normal adults as by those with diseased livers.

Preliminary Experiments.

After preparing the three solutions required for the test, a patient with a diseased liver (Case A, Table II) was selected for the first trial, and as the results obtained seemed to confirm the claim made for it, the next test was done with a healthy adult (Case 1, Table I). The same

TABLE I.—*Normal Cases.*

No.	Age.	Date of Test.	Urine specimens.		Test for salicylic acid.	Standard to match the colour.	Remarks.
		1928.		c.cm.		c.cm. or mg	
1	55	Jan. 23	1st	54	Neg	—	Special care given to extractions in 1*a*, the second trial on same adult.
			2nd	206	Pos.	0.5	
1*a*	„	Jan. 26	1st	43	Pos.	0.25	
			2nd	136	Pos.	0.75	
2	16	Jan. 27	1st	40	Pos.	0.25	
			2nd	135	Pos.	0.75	
3	32	Feb. 14	1st	8	Pos.	0.18	Extraction not complete. See *a* and Note 1.
			2nd	176	Pos.	0.1	
3*a*	„	—	Same specimen		Pos.	2.0	20 times more than No. 3.
4	28	Feb. 22	1st	34	Pos.	0.37	Improved yield explained in Note 4.
			2nd	181	Pos.	1.5	

results were obtained as with Case A, and thus were contrary to the statement on which the test is said to be based. It was therefore considered advisable to repeat the test on the same healthy adult. Salicylic acid was again found present in the second specimen of urine and, this time, in the first specimen also (Case 1a, Table I). The result with the second specimen in Case 1 was thus confirmed, and the negative result with the first specimen could be explained as possibly due to inexperience with the method, and to the apparatus used for extraction being to some extent unsuitable.

These results raised a very grave doubt as to the reliability of the statement that normal adults could assimilate sodium salicylate and no trace of salicylic acid would appear in the urine, especially as a reference to the pharmacology of salicylic acid showed that "it appears in the urine very soon after its ingestion [ten to thirty minutes], but the elimination goes on slowly."[3]

Later Work.

These trials were done to remove this doubt, and the test was carried out with three other healthy adults and three more patients with diseased livers. Details with results have been tabulated below, followed by notes on the laboratory work. The cases referred to in Table I were four healthy adults who had never had any illness suggestive of liver disease, and they were therefore chosen as normal adults, all being males, their ages ranging from 16 to 55 years. Table II refers to four cases treated in

TABLE II.—*Cases with Hepatic Disease Present.*

No.	Sex.	Age.	Date of Test.	Diagnosis.	Urine specimens.		Test for salicylic acid.	Standard to match the colour.	Remarks.
			1928.			c.cm.		c.cm.	
A	M.	58	Jan. 18	Cirrhosis of liver and tertiary syphilis	1st	22	Neg.	—	No bile in urine.
					2nd	71	Pos.	0.5	
B	F.	66	Feb. 14	Carcinoma of pancreas	1st	36	Pos.	0.1	Bile present.
					2nd	92	Pos.	0.5	See Note 5.
C	M.	25	Mar. 1	Catarrhal jaundice	1st	52	Pos.	0.2	Bile present.
					2nd	2·6	*a*, Pos.	0.2	See Note 6.
							b, Pos.	0.4	
D	M.	70	Mar. 8	Cirrhosis of liver and ascites	1st	45	Pos.	0.25	Bile present.
					2nd	130	Pos.	2.0	See Note 7.

the hospital, having diseased livers as shown in the "Diagnosis" column of the table. The first specimen of urine was collected one hour after the dose of salicylate was given, and the second specimen four hours later.

Notes on the Laboratory Work.

1. The chief aim was to detect any trace of salicylic acid present in the urine, and not merely follow a procedure which might give a negative result although a trace was in fact present. A comparison between the results of Cases 3 and 3*a* illustrates how a negative result may occur as a consequence of some incomplete extraction, as, when the second specimen of urine in Case 3 was re-extracted, twenty times more salicylic acid was proved present than was found by the first extraction. The only negative results obtained occurred with the two cases first tried, and one of these at least was proved as probably incorrect by the second trial giving positive results (Case 1*a*), as already explained.

2. The first specimen of urine in every case ranged from 22 c.cm. to 78 c.cm., and so the entire specimen in each case was used for the extractions.

3. The second specimens ranged from 71 c.cm. to 216 c.cm., and as these were not too inconvenient to extract the entire specimen was again used, except in Case C, where it was halved for the purpose explained below.

4. In the earlier extractions the ether was shaken up with the urine in the 8-oz. wide-mouthed stoppered bottle used for collection, and the separation of the emulsion was performed by transferring successive portions of the mixture to a glass-stoppered burette; but the bottle stoppers did not fit very well, the process was somewhat messy, and the separation was tedious. So after the experience with Case 3—where the salicylic acid (proved present in both specimens) was so much less than in the previous cases—a conical glass-stoppered separating funnel was obtained and used for the re-extraction in Case 3*a*, and for all the later extractions.

5. In cases B, C, and D bile pigment was present in the urine, and was extracted by the ether along with the salicylic acid. In case B the ethereal layer was not completely evaporated before adding to the ferric chloride, and on mixing the liquids the aqueous layer showed a distinct purple tinge while most of the bile pigment remained in the ethereal layer. In Cases C, 3*a*, 4, and D the ethereal extract was evaporated to a small bulk, and the bile pigment combined with the violet colour due to the salicylic acid, the resultant colour being a brown.

6. To test whether extraction by rotating vigorously in a beaker with ether could be complete, the urine of Case C was thus treated, and then, after separation of the ether (by use of the separating funnel), the urine was re-extracted by shaking with a fresh lot of ether in the funnel. The extraction of the first

specimen of urine in the beaker proved to be complete, the re-extraction giving no salicylic acid. The second urine specimen was halved, and one half (108 c.cm.) was extracted twice as above, the other half being used as a check by extracting once only by vigorously shaking in the separating funnel. In this instance the beaker method gave no colour indicative of the presence of salicylic acid, whereas the second extraction gave a distinct trace (*a*, Case C). The check half of the urine gave a more distinct trace (*b*, Case C). These results, therefore, indicate that the open beaker method is the less reliable of the two.

7. In Case D the extract gave a more decided colour reaction than any of the others with bile pigment present, and it was interesting to find that the effect of the yellow bile pigment could be exactly imitated in the tubes with the violet standards by mixing with a few drops of the yellow solution of potassium chromate.

Summary.

The foregoing is a report on work done in trying a new test for hepatic efficiency, based on the use of sodium salicylate, as described in the *British Medical Journal*.

The preliminary work consisted in trying the test on a selected patient, and then comparing the result with that obtained with a normal adult. As the results were the same in both cases further investigation was considered necessary, especially as a doubt arose about the reliability of the statement that "normal adults could assimilate a 3/5-grain dose of sodium salicylate, no trace appearing later in the urine."

The later experiments were carried out with three more normal adults and other three cases with damaged livers, all the results being shown in tabular form, followed by a discussion of the tables in the form of notes, explaining how and why the method of extracting the salicylic acid was slightly varied, and pointing out that bile pigment modified the violet colour of the salicylic acid test to a brown, which could be matched in the standard colour tubes by the addition of potassium chromate.

Conclusion.

1. The tables show that salicylic acid appeared in the urine of each of the four healthy adults after the ingestion of a small dose of sodium salicylate, as well as in that of four other cases with damaged livers.

2. Its appearance in the urine of the first hour confirms the statement quoted in reference to the pharmacology of salicylic acid, and does not support Thiers's statement.

3. The tables show that no distinction can be made by means of this test between the four normal adults and the four cases with damaged livers.

From the above results it is concluded that this test, as described in the publication referred to, can be of no use in classifying cases with damaged livers, or in measuring the extent of the damage.

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BRONZED DIABETES IN A WOMAN.

BY

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I VENTURE to publish these notes on account of the rarity of bronzed diabetes in women, and because this case seems to have run an unusual course. The patient was seen at the maximum of bronzing by three other medical practitioners, who could suggest no other diagnosis; one who had previously seen a case (in a man) thought the bronzing typical.

The clinical details available are as follows.

Family History.—The grandparents all lived to advanced ages; the father died of uraemic coma at the age of 74, and the mother died of the same complaint at the age of 70. There were eight children, of whom the patient was the eldest. She was perhaps mentally the brightest of a not very bright family. The next in age, a male, died of "cancer of the liver," aged 30; he was congenitally blind. The third, also a male, died of epilepsy at the age of 30. The fourth, a female, is living, mentally deficient and congenitally blind. The fifth, a male, is living and is normal. The sixth, also a male, is alive and normal, but mentally he is rather dull. The seventh, a female, is living; she is mentally deficient and congenitally blind. The eighth, a male, is living, and is normal. None of them show any signs of syphilis, and two who have been examined (the fourth and seventh) give negative Wassermann reactions.

Personal History.—This gives nothing of importance. The patient was a very stout woman, but exceedingly active. Her chief ailments have been flatulent dyspepsia and some cardiac insufficiency. She had had no medical attention for five years.

Clinical Details.

On November 11th, 1927, the patient was deeply jaundiced, with anorexia, but no sickness and no diarrhoea. She had become much thinner since the previous May, the loss of flesh coinciding with extreme thirst.

The liver was easily felt two inches below the costal margin, and the spleen about the same. Both were smooth, regular, and soft. The liver was slightly tender. Nothing else abnormal was found. The heart sounds were normal, but muffled, and the lungs were normal. The urine contained much bile pigment, but no albumin; sugar was present in large quantity. At this time there were on the forehead and forearms what appeared to be a few freckles.

The jaundice cleared up under treatment in ten days. The patient was put on a strict non-carbohydrate diet. The urine sugar rapidly diminished, and early in December, 1927, the urine contained only a trace. A blood examination gave 65 per cent. haemoglobin and a normal white cell count.

On December 12th there was a sudden rise in the urinary sugar, and acetone was present. The patient became partially comatose, and had apparently marked pain over the spleen. She remained in this condition, sometimes rousing and sometimes completely unconscious, for a month, the heart gradually getting weaker and dropsy developing; but the sugar had completely disappeared from the urine on December 20th, and was never found again until just before her death.

During this period pigmentation became very apparent, involving the face, neck, forearms, and both groins, with scattered patches on the abdomen, back, and both thighs. The pigmented spots were of all sizes up to a threepenny piece, many coalescing. Her face presented a curious appearance—a mottling of yellow shading up to deep bronze on a skin almost mauve in colour. There was incontinence of urine and faeces, and bedsores developed. By this time the liver and spleen both reached halfway from the costal margins to the umbilicus.

From the middle of January, 1928, she began to improve. The heart regained its tone; her colour became normal except for the bronzing; the bedsores healed; the appetite returned. In July she was downstairs, walking in the garden, and doing needlework. The bronzing was beginning to fade. From now on she was seen and the urine examined at fourteen-day intervals.

On November 9th, 1928, five days after the last visit, she suddenly complained of feeling very ill—"just as I did before." The urine was found to contain a fair amount of sugar. She became comatose on November 10th, and died the following day.

Post-mortem Findings.

Only a partial necropsy was allowed. There appeared to be no pigmentation of the peritoneum. There was little free fluid, and this was clear. No abnormal mass or tumour could be found. The liver was about two and a half times its normal size, and appeared uniformly enlarged. It was smooth, rather soft, and pale; it was densely adherent posteriorly. The gall-bladder and duct were normal. The spleen measured roughly 9 in. by 5 in.; it was smooth, extremely friable, and adherent to the periphery and omentum. Both kidneys were enlarged and soft. The heart was enlarged and infiltrated with fat; the valves showed no disease. There was some staining of the pericardium, but not enough to be definitely called pigmentation.

Pathologist's Report

Portion of Spleen.—There is general slight chronic perisplenitis. The pulp is soft. A few dark points are seen. The Malpighian bodies are not easily distinguished and not much fibrosis can be discerned.

Liver.—There is generalized monolobular cirrhosis with much yellow pigmentation along the prolongation of Glisson's capsule. The liver substance is fatty.

Pancreas.—The glandular tissue is largely replaced by fat. No pigmentation can be distinguished.

Suprarenals.—Soft, but normal.

Kidney.—It is slightly enlarged and soft. The cortex is not clearly diminished; it is pigmented and yellow. The capsule strips leaving a number of arterio-sclerotic depressed patches of various sizes. The pyramids show whitish streaks towards the papillae.

Microscopic Examination.

Spleen.—The pulp is of a loose fibrotic texture; the Malpighian bodies are atrophied. The trabeculae appear normal, but bacillary emboli are present in some of the vessels. There are no gross lesions anywhere to be seen. Many of the cells contain pigment granules, and free granules are also present, but it is not possible to say how much of this is due to *post-mortem* change. The iron reaction of the spleen is feeble and consists of occasional blue granules.

Liver.—There is a moderate increase of fibrous tissue along Glisson's capsule. In the liver cells bordering the portal spaces there is a great increase of pigment. Marked cellular exudation is evident in Glisson's capsule. The bile ducts are normal and not increased in number. The cellular inflammatory infiltration consists of a proportion of polymorphs, more marked in the periphery of Glisson's capsule. There is a small amount of haemosiderin in the liver. It is mainly confined to the neighbourhood of the intralobular veins. There is no excess of haemosiderin in the portal spaces.

Pancreas.—There is shrinkage and atrophy of some of the acini, and in others the nuclei are stained more deeply than normal; some catarrh of the duct is present. The islets of Langerhans are present.

Kidney.—There is generalized chronic interstitial nephritis. In many parts of the section the descending loops of Henle are necrotic, probably due to *post-mortem* changes. There is some arterio-sclerosis and degeneration of some of the glomeruli up to complete atrophy. Here and there round-celled infiltration can be seen. There is much catarrh of the collecting tubules, and some of them contain cells full of pigment. The epithelium of the collecting tubules is impregnated with grains of pigment.

It is regrettable that the patient and her family absolutely refused her admission to hospital, where a more thorough clinical examination would have been possible.

My thanks are due to Dr. A. G. Gibson of Oxford for his kind interest in the case, his advice, and his examination and report on the *post-mortem* specimens.

LOCAL ANAESTHESIA IN OPERATIONS FOR HAEMORRHOIDS AND FISSURE OF THE ANUS.

BY

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THE use of a local anaesthetic for the operative treatment of haemorrhoids and fissure of the anus has many advantages over a general narcosis.

1. Any one of the numerous operations advocated for the cure of haemorrhoids can be performed quite painlessly, including the most painful procedure—the most dangerous of all with a general anaesthetic—dilatation of the sphincter ani.

2. Its innocuity, both local and general.

3. Its local action, lasting several hours after the operation, thereby curtailing the duration of after-pains.

4. The ease with which it can be employed.

These are all compensations for the extra time required in making the necessary number of injections and the following of an exact technique such as that to be described.

The use of dilute solutions for local anaesthesia (as here used) was first introduced by Schleich, but to Reclus belongs the merit of their popularization and their use in rectal surgery, more especially in operating on piles. For all practical purposes the method here given is his, with, however, some modifications which have been found to be useful. The solution for these operations which is recommended is composed as follows:

Novocain	0.5 cg.
Adrenaline (1 in 1,000)	24 minims
Physiological saline solution	100 c.cm.

Mix and sterilize.

It will be noted that the amount of adrenaline is small, but in practice it will be found to be ample (a dilution of 1 in 1,000,000 will produce a local ischaemia) for rendering the field bloodless, without fear of any subsequent sloughing, notwithstanding the large amount of the solution employed. It is, however, important that the percentage should not be stronger than indicated, and the injections must be well spaced so that a considerable extent of the subcutaneous tissue is infiltrated. When injection is not confined to a localized zone of tissue sloughing never occurs.

The injections are made in the following manner. The patient, having been duly prepared in the usual way, is put in the lithotomy position, the legs resting on some appropriate supports. (1) About six small pledgets of cotton-wool are first prepared, their diameter being that of the little finger and their length one inch. They are tied in the middle with a piece of silk or linen thread, one end of which is left four or five inches long to be used as a tractor for removal. Pour into a sterilized receptacle 15 to 20 c.cm. of the solution, and place the pledgets in it. With the aid of a pair of artery forceps introduce the saturated pledgets one by one into the anus, asking the patient to "bear down" meanwhile; this renders the mucous membrane insensitive and relaxes the sphincter ani, as shown by the gaping of the anal orifice. (2) Swab with iodine the anus and surrounding skin. (3) Take an all-glass 5 c.cm. syringe and fill it with the solution; adjust an ordinary (not too fine) hypodermic platinum or nickel needle, push it into the cellular tissue at the junction of the skin and mucous membrane, and begin the injection. Push the needle along slowly, distending the tissues ahead of the needle-point with the solution; in this manner the fluid is infiltrated without pain. The first needle prick is all the patient need ever feel during the whole course of the operation. When the syringe is empty, withdraw the needle, refill and insert it again just beyond the middle of the swelling made by the previous injection. Repeat these injections in the same way so as to encircle the anus, special care being taken to go slowly when crossing the middle line, for the sensibility on the opposite side has not been affected by the injections already given. In all from six to eight injections are necessary—equal to 30 to 40 c.cm. of the solution. (4) Now remove the pledgets by traction on their threads; they will almost fall out by themselves. Fill the syringe and use a long medium-sized platinum or nickel needle. (5) Insert the forefinger of the left hand into the rectum, hook the internal sphincter with it so as to steady it and draw it down. (6) Pierce the tissues perpendicularly to the previous injections and at the same level; push the needle well into the sphincter, injecting meanwhile. It is of the utmost importance to steady the muscle so that it shall not slip away from the needle; this may be quite difficult to do towards the end of the injections, as the sphincter will be felt to "fade away," it having lost tonicity almost completely. Encircle it with six or seven injections—equal to 30 to 35 c.cm. of the solution. The insensibility will now be complete.

Wash the hands again (it is always well to wait about five minutes after the last injection before beginning the operation) and proceed with the preliminary requirement to all rectal operations—namely, stretching of the sphincter ani. In cases of simple fissure this may be all that is necessary to effect a cure; in others, and in fistulae, excision, curetting, and the use of the actual cautery can all be employed painlessly, the patient only experiencing a sensation of touch and the realization that something is being done. If piles are present they are now dealt with by any of the numerous methods, according to the choice of the operator. I prefer Mitchell's technique in general to all other methods for the removal of piles, whether pedunculated or with intervals or sulci; with a pair of Kocher's artery forceps clamp the pile and cut off the upper part. A running suture of catgut is passed under and over the forceps, a tie having been made after the first stitch under the clamp at the distal end of the pile to control more securely its blood supply. Now withdraw the clamp; pull the suture taut and tie it off. This is a very safe method, as the sutures will not slip, thus assuring complete haemostasis. The raw edges are turned in, and are therefore less painful. Any number can be dealt with; the results are excellent. A short piece of large rubber tubing, wrapped round several times with a strip of gauze well smeared with a 1 per cent. antipyrine ointment, is inserted. It relieves pain, and at the same time acts as a compressor against haemorrhage; it permits the free passage of flatus while controlling spasm, and can be removed in twenty-four hours or sooner should it cause discomfort.

I have used this method of local analgesia since 1910, and have never seen a complication of any kind nor a single slough induced by it in the considerable number of operations in which it has been used. The only likely complication is retention of urine, which is encountered also in general anaesthesia; this is due to the way the sphincter has been dilated.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CARDIOSPASM TREATED SUCCESSFULLY BY OPERATION.

I THINK it desirable to record the following details of a case of cardiospasm which was treated with remarkable success by the operation of Mikulicz.

A man, aged 25, had for six years suffered from progressively increasing difficulty in swallowing. He stated that the food appeared to be arrested in the lower part of the chest, and could only be made to pass by drinking water with each mouthful, whereupon the food passed with a jerk. Epigastric pain was frequent, coming on usually three or four hours after food; this was often succeeded by vomiting, which at once relieved the pain.

On examination the patient was found to be thin, but otherwise in good condition. A radiographic examination revealed the typical appearances of cardiospasm, with enormous oesophageal dilatation and a well-defined constriction at the lower end.

After preliminary passage of an oesophageal rubber tube I opened the abdomen by a right paramedian incision above the umbilicus. The anterior wall of the stomach was incised longitudinally, midway between the greater and lesser curvatures, and the whole of the right hand was introduced into the interior of the stomach; the index finger was then inserted into the lower end of the oesophagus. Considerable resistance was at first presented to the passage of the finger, but this was overcome by steady pressure, and the middle finger was inserted alongside the index. Separation of these two fingers resulted in sufficient dilatation of the obstruction to permit the introduction successively of the ring and little fingers. The incision in the stomach was sutured by two layers of catgut, and the abdomen was closed. The patient made an uninterrupted recovery from the operation, and at the end of two weeks was able to swallow normal food without difficulty. There has been no recurrence of any symptoms.

An *x*-ray photograph taken three months after the operation showed that the oesophageal dilatation had almost entirely disappeared, and that there were no signs of the constriction revealed in the pre-operative skiagram.

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SPLENIC ENLARGEMENT AND RAW SPLEEN.

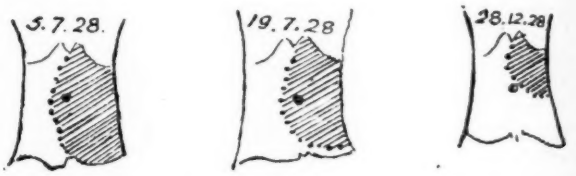
THE following case of atypical leukaemia, and its extremely rapid improvement under treatment, may be of interest.

Mrs. X, aged 48, first came under my notice during the early days of July, 1928. She complained of progressive swelling of the body since the previous February, palpitation and breathlessness on the slightest exertion, and complete inability to tackle any of her usual household duties. I also elicited the information that she had lost several pounds in weight, and that for the previous two years she had had several "floodings" (metrostaxis). On examination I found an extremely enlarged spleen fully occupying the left half of the abdomen, reaching to the pubes below and extending well beyond the middle line. The notches were distinctly felt. No enlarged lymph glands were found anywhere. Fully confident that this was a myelogenous variety, on July 3rd I took a blood smear, a differential count of which gave the following surprising result: Polymorphonuclears 2.25 per cent., small lymphocytes 97 per cent., large hyalines 0.50 per cent., transitionals 0.25 per cent. Nothing abnormal was seen in stained red cells. There was apparently a marked leucocytosis.

On the advice of a consultant the patient was admitted to the Leeds General Infirmary, a provisional diagnosis of atypical lymphatic leukaemia having been made. Here she was placed on the usual benzol and *x*-ray treatment for fourteen days. Two blood counts were taken, one on July 5th and the other on July 10th. That taken on July 5th was as follows: Red cells 3,570,000, leucocytes 35,000, haemoglobin 52 per cent., colour index 0.73. The red cells appeared normal, the lymphocytes were of small type, but much larger than normal. A differential count showed: Polymorph neutrophils 3 per cent., lymphocytes 97 per cent. The result of the blood count taken on July 10th was as follows: Red cells 4,170,000, leucocytes 14,700, haemoglobin 50 per cent., colour index 0.60. The film showed irregular size and staining of red cells with some polychromatophilia. A differential leucocyte count showed: Neutrophil polymorphs 8.5 per cent., lymphocytes 91.5 per cent.

The patient was discharged from the Infirmary on July 19th, with the spleen only slightly decreased in size. She returned on two separate occasions, fourteen and twenty-eight days later, for *x*-ray exposure. After her return home I placed her on large doses of iron, strychnine, and arsenic, and advised her to take regularly raw spleen. Since July 19th she has taken on an average twelve to fourteen raw sheep's spleens per week. Marked improvement in her general condition began to show itself. She has now gained 16 lb. in weight, there is no palpitation, no breathlessness, no lassitude, and no metrostaxis. She feels very fit and can manage all her usual household duties (this she has been able to do since September). Her spleen, though still enlarged, is greatly reduced in size, and on December 7th a further blood count was taken. This showed: Red blood cells 4,850,000, leucocytes 3,870, haemoglobin 68 per cent., colour index 0.7. Differential count: Polymorphs 46 per cent., lymphocytes 46 per cent. (small 42.5 per cent., large 3.5 per cent.), large hyalines 5.5 per cent., eosinophils 2 per cent., basophils 0.5 per cent. Nothing abnormal was found in stained films.

I am given to understand that the improvement in this case is much greater than is usual with *x*-ray and benzol treatment, and it would be interesting to know whether other splenic conditions, notably myelogenous leukaemia, would react in the same way. The accompanying diagrams illustrate the spleen at various stages of the illness.



I am deeply indebted to Mr. D. Chamberlain, honorary surgeon at the Leeds General Infirmary, for permission to use his clinical data, and to Dr. S. Goodman Platts, of the York County Hospital, for his excellent blood counts.

York. H. TAYLOR, M.B., Ch.B.

Reports of Societies.

ACUTE INTESTINAL OBSTRUCTION.

AT the meeting of the Medical Society of London on February 25th, Dr. J. WALTER CARR presiding, a discussion on the subject of "Acute intestinal obstruction" was opened by Professor A. H. BURGESS of Manchester, President-Elect of the British Medical Association.

Professor Burgess began by saying that the present century had witnessed a great improvement in the surgical treatment of acute abdominal crises (he protested strongly against the inelegant term, which was of London coinage, "the acute abdomen"). So far as Manchester Royal Infirmary was concerned, the mortality from acute appendicitis in 1924 was one-twelfth of what it had been in 1900; the mortality from perforations one-seventh, and the mortality from acute intestinal obstruction one-half. He referred to the statistical compilation of cases of acute intestinal obstruction brought forward by Mr. H. S. Souttar in the Section of Surgery at the Annual Meeting of the British Medical Association in 1925, which was the largest and most authoritative series of statistics available. It covered the period 1920–24, and the returns from seven hospitals, three in London, three in the provinces (including Manchester), and one in Ireland. He hoped that Mr. Souttar would compile a further series for the following five-year period and present it to the Winnipeg Meeting of the Association in 1930. Professor Burgess adopted Mr. Souttar's figures, but modified them by cutting out all cases of strangulated hernia and acute intussusception, for the simple reason that there was no excuse for missing the diagnosis in either of these conditions, and he wanted the statistics to represent those cases of acute intestinal obstruction the diagnosis of which was not readily obvious. This left 1,042 cases, in which there had been 395 deaths, a mortality of 37.9 per cent. It was this mortality which must be reduced. In Manchester some reduction had been effected. Thus the mortality for the ten-year period 1913–22 was 41.07 per cent., for 1920–24 (the period covered by Mr. Souttar's tables) 33.5 per cent., and for 1925–27 only 30.2 per cent. What was the reason for this continuing high mortality? The main reason was delay in the application of surgical treatment. The early signs of acute intestinal obstruction were not sufficiently stressed in the textbooks, at least in those of rather older date. Far too much emphasis, for example, was usually placed upon faecal vomiting. This should never be regarded as a sign of acute intestinal obstruction; it was really an end-result. There was a tendency to wait for the

development of faecal vomiting before diagnosing obstruction; in other words, to wait for a complete and perfect clinical picture. But there was only one hand that ever painted a complete and perfect clinical picture of a pathological condition, and that was the hand of death. The man who waited for faecal vomiting would never make a mistake in diagnosis, but rarely would he save his patient. Acute intestinal obstruction, Professor Burgess continued, might be either primary or secondary. It might come as a "bolt from the blue," or be simply a process engrafted upon a long-standing chronic condition. In distinguishing between a primary and a secondary obstruction there were two clinical features which were important. In secondary obstruction which had been grafted on to a chronic condition one frequently saw the outlines of individual dilated coils and visible peristalsis passing along. Sudden acute obstruction always led to dilatation, with thinning of the wall, but never to visible peristalsis. Whenever the outline of dilated coils was seen, with the peristaltic wave passing along, one might be absolutely certain that it was a case of obstruction which had been in existence for at least several weeks. Sometimes, even when peristalsis was not visible, it was palpable. By keeping the hand over the abdomen the coil underneath could be felt alternately hardening and softening. That condition of palpable peristalsis, again, indicated obstruction of some considerable standing. Primary acute intestinal obstruction varied in acuteness of onset. In general terms, the higher the obstruction—that is, the nearer the stomach—the more acute the symptoms. The early symptoms of acute primary intestinal obstruction were common to those of any other acute abdominal crisis; they were the symptoms which, years ago, were described by Sir Frederick Treves as "peritonism." They were of reflex origin, and had no localizing value whatever. In the case of acute intestinal obstruction, the pain was always referred to the epigastric region. The pain was often paroxysmal at first, becoming continuous as the obstruction became complete. The vomiting, like the pain, was at first of a reflex character; later on it was due to mechanical obstruction. The higher the site of obstruction the earlier the vomiting. It was most marked in the highest type of obstruction, the condition known as acute dilatation of the stomach. When the obstruction was low down, as in growths of the rectum or lower sigmoid, vomiting might be absent. The vomiting was at first gastric, later bilious, and presently assumed a faecal character; its persistence, however, was its most important feature. Distension of the coil above the site of obstruction must, of course, be present, but it was not always visible. If the case was seen early the distension might be localized and furnish a guide to the site. Vomiting and distension varied inversely to each other. In high obstruction, vomiting was marked, and distension not marked; in low obstruction the converse obtained. Distension was the most unfavourable feature; it made the operation much more difficult, and markedly increased the shock. The speaker pleaded for auscultation, which was of great value in diagnosis. Certain sounds, after a little experience, were quite unmistakable. By auscultation one could distinguish between the turbulence of the mechanical obstruction and the death-like silence of the paralytic. Rectal examination was of value also, especially in discovering the ballooning of the rectum which was so frequently made out when there was growth in the sigmoid region. In Mr. Souttar's list, out of 1,019 cases where the site of obstruction was stated, 586 were in the small intestine, and 433 in the large. At Manchester the experience was different; there more cases of obstruction were found in the large intestine than in the small. In one analysis of 280 cases, 90 were in the small, and 190 in the large. The keynote of the position was the condition of the caecum. If the obstruction was in the colon the caecum must be distended; if in the small intestine, it must be collapsed. If obstruction were located definitely to the large intestine the cause was likely to be a malignant growth; 91 per cent. of obstructions in the large intestine (leaving out strangulated hernia and intussusception) were due to this cause. If the obstruction were definitely made out in the small intestine the chances were 300 to 1 against the condition being a malignant growth. As to treatment, this, in definite mechanical obstruction, could only be operation. There were accessory treatments, of which the most valuable was gastric lavage. The nature of the operation would depend on the stage of the disease. In the early case, with little distension, and good general condition, an ordinary exploratory laparotomy might be done to discover where the obstruction was, and either remove it, short circuit it, or make an artificial anus, in that order of preference. In late cases, the less done, provided it was effective, the better. If the obstruction was located definitely to the colon he thought one should content oneself for the time being with a "blind" caecostomy, which would, at any rate, relieve the obstruction. It was true that one was still left ignorant as to the exact site and cause, but this information could be obtained later; with a patient in the throes of acute obstruction all that mattered was to relieve the obstruction by the shortest and least shock-producing method. If, however, one was not sure that the obstruction was in the colon, an exploratory laparotomy must be done. While a "blind" caecostomy was recommended for obstruction in the large intestine, a "blind" enterostomy was by no means to be done in the small, because of the extreme likelihood of leaving behind a strangulated coil, which would inevitably lead to the death of the patient.

Dr. C. H. S. FRANKAU emphasized the necessity of differentiating between the obstruction due to a growth, gradual in onset, and the acute obstruction due to such an occurrence as strangulation by a band. Toxaemia was always present within a few hours of the onset of acute intestinal obstruction, owing, he thought, to the rapid multiplication of anaerobic bacilli in the bowel. His personal opinion was strongly averse from "blind" caecostomy; he had only done one such operation in eighteen years. He had never regretted doing a preliminary exploration, the advantages of which were that one could ascertain the site of the obstruction for the subsequent operation, or could remedy the obstruction there and then if possible. The disadvantage was a certain prolongation of the operation, but this should not be for more than ten or twelve minutes at the most. He performed the old-fashioned muscle-splitting incision, preferring to expose the caecum fairly freely. He disapproved of the method of sewing in a soft rubber tube; it was safer to bring a portion of the caecum out through the abdominal wall, to which it could be securely attached. In the type of obstruction due to strangulation, if any bad distension were present the prognosis was grim. Acute obstruction was apt to be mistaken for food colic, especially if the patient's story of what he had eaten at a recent meal were unduly regarded. The giving of castor oil without result helped to rule out food colic. The speaker added a few words about ileus, where there was no mechanical obstruction. He thought this might be divided into three categories: (1) ileus following injury, which was troublesome, and might be persistent, but was rarely, if ever, fatal; (2) post-operative ileus, where there was no antecedent peritonitis, and none subsequent to operation; here bile given by the rectum might afford relief; (3) ileus as a sequel to peritoneal inflammation, where the main standby was fluid given freely and continuously by the rectum and by the mouth also if circumstances allowed.

Mr. H. W. CARSON said that the higher the obstruction the more definite the symptoms, and the lower the obstruction the more definite the signs. In excluding hernia and intussusception Professor Burgess had done right, but unfortunately he cut off those cases in which the greatest advance had been made, and in which the death rate was much lower than in former years. Why did people die from intestinal obstruction? If a case were followed out to its final stages it would be found that the patient suffered from an extraordinary condition of toxaemia, dying quite suddenly, almost unexpectedly, from what seemed to him poisoning of the heart muscle. He thought there was a good deal to be said for the theory that it was gas gangrene toxaemia, and he himself had had some extraordinary results from the use of anti-gas gangrene serum.

Mr. ZACHARY COPE commended anti-gas gangrene serum, which during the last three years had made a great

difference in his own practice. He described some cases almost moribund which recovered. Undoubtedly in a certain proportion of cases anti-gas gangrene serum was a specific. He was himself an advocate neither of "blind" caecostomy nor of extensive exploration; the procedure must be adapted to the individual case, and to an estimation of what the patient would stand, in which latter respect the determination of systolic and diastolic blood pressure was very useful.

In further discussion, Mr. T. H. BENIANS complained of the loose use of the term "toxaemia" by surgeons. These toxins were practically all of one type; the important thing was the route that they followed. Mr. HOPE CARLTON, in connexion with what had been said about auscultation of the abdomen, mentioned a sign which he had learned abroad, that in primary peritonitis, either pneumococcal or streptococcal, a great increase in the conduction of vocal sounds from the chest through the abdomen was heard over the symphysis pubis. Dr. A. E. ROCHE, in selected cases of post-operative ileus, had seen dramatic results from pituitrin, given intravenously. Mr. DICKSON WRIGHT mentioned the importance of taking steps to overcome the alkalosis.

Professor BURGESS, in reply, said that there was no real antagonism between the view that some of the symptoms were due to anaerobic bacilli and that some were due to absence of bile. Both factors might be at work. The danger of treating with bile, however, as the exponent of the method, Mr. Brockman of Sheffield, had himself shown, was that though the symptoms cleared up the patient might die. The mechanical obstruction remained, and the disappearance of symptoms was apt to be deceptive. With regard to "blind" caecostomy the speaker advocated this at the Annual Meeting of the British Medical Association in 1923, and he had seen no reason to change his views. After the patient had been "tided over" in this manner, one could, at leisure, obtain the necessary information.

PREVENTION OF DENTAL DISEASES IN CHILDREN.

AT the meeting of the Section of Odontology of the Royal Society of Medicine on February 25th, Mr. GEORGE NORTHCROFT presiding, a "casual communication" from Dr. J. KINGSTON BARTON was read on "The prevention of diseases of the teeth in children."

Dr. Kingston Barton stated that when he started in general practice, just fifty years ago, having plenty of spare time, he attended the out-patient departments of several of the children's hospitals in London, and also was fortunate enough gradually to develop a fairly large practice amongst young mothers and children. Impressed by the importance of the teeth, he printed, for free distribution amongst his patients who were mothers, sheets containing particulars of the milk dentition, the order of cutting, and the age at which (between the seventh and the twenty-fourth month) the different teeth were usually cut; then he asked that, in blank spaces provided, the age at which the teeth actually came through should be inserted, and he pointed out that any great delay in cutting should be reported to the medical adviser. The sheet also contained a diagram to enable the mother to distinguish the different teeth, as well as a number of warnings and instructions with a view to preventing the onset of rickets, which was almost invariably the cause of delayed teething, and to ensure that the infant had food of the right kind. A specimen sheet was thrown on the screen. For twenty-five years, said Dr. Barton, he kept careful records of all the mouths which came under his observation. He found that a good state of the teeth and jaws was always associated with breast-feeding; the next best was seen in infants fed on ass's milk, or goat's milk, or fresh cow's milk; and the really bad teeth were found in children who had been hand-fed on various kinds of tinned or preserved milk foods, some of which were much worse than others in their ill effects. He also laid great stress in his practice, a generation ago, on the misuse of starch foods as given to infants. During the past twenty years it had been the fashion to scoff at the views expressed about the ill effects of starch, but in Professor Mellanby's most recent paper he noticed that emphasis was laid upon the ill effects of too early use of various cereals in infant feeding. In the sheet just mentioned Dr. Barton had written: "Too early use of sago, rice, and bread, particularly if not well cooked, will also set up rickets." He had added, "As the germs of the permanent teeth are being formed in the gums whilst the milk teeth are cutting, any disorder of nutrition which affects the one set will also affect the other. Hence delayed teething of the milk set is often the precursor of delicate and decayed permanent teeth; this, again, being one common cause of delicate manhood and womanhood." Dr. Barton said that there was really only one way of preventing early disease of the teeth in children, and that was by the insistence on proper breast-feeding, or, if this was absolutely impossible, on the use of pure fresh cow's milk. He also deprecated the sweets and sticky foodstuffs with which modern children were plied at all times of the day, to the utter corruption of their teeth.

The PRESIDENT of the Section said that he thought it would be the general wish that the dentition diagram shown by Dr. Kingston Barton should be handed to the curator of the odontological museum at the Royal College of Surgeons. It was extremely interesting evidence of what was done by one general practitioner in the early eighties in anticipation of modern odontological science.

THE SIGNIFICANCE OF CHOLESTEROL.

AT a meeting of the Liverpool Medical Institution on January 17th Dr. E. NOBLE CHAMBERLAIN read a paper on the significance of cholesterol in physiology and pathology.

Dr. Chamberlain gave a brief account of the physiology concerned, mentioning as possible channels of excretion the bile, intestinal mucosa, and the skin. He said that the last of these seemed to have been neglected in the literature, but since cholesterol was contained in appreciable amounts in the superficial layers of the skin, desquamation of these would lead to its loss. To make up for this the body probably absorbed cholesterol from the food, but at certain times it required a supplementary supply which was produced by synthesis, the most likely site for which was in the suprarenal glands. This view had been put forward by the French school some years ago, and, though denied by the German school, it had received support from personal observations by Dr. Chamberlain. Further, the vital nature of the suprarenal glands seemed to be intimately related with the abundance of cholesterol present in their cortex. The uses of cholesterol were summarized. It was required for the constant repair of cellular tissues, during the breakdown of which some was undoubtedly lost. The cholesterol was supplied through the medium of the blood, in which it was contained in approximately equal amounts in both corpuscles and plasma. It occurred in a free form and as esters. Esters were principally contained in the plasma. In any individual, the blood cholesterol was constant in amount. This was due to a proper balance between intake and excretion and between synthesis and destruction. It was suggested, on experimental grounds, that a finer mechanism for regulation of blood cholesterol might reside in the spleen. In the growth of the central nervous system an adequate supply of cholesterol was essential, since this system was very rich in cholesterol. Cholesterol had notable antihaemolytic properties, particularly against substances of the saponin group. It played some part in processes of blood coagulation and sedimentation of the red cells. The development of immunity was closely associated with a rise of blood cholesterol, and it had been thought that cholesterol might have an important part in the production of immunity. In fat metabolism, again, cholesterol was constantly associated with the other fatty bodies, and it seemed likely that it took a prominent part in the metabolism of fats. Lastly, the discovery that irradiation of ergosterol led to the formation of the important vitamin D had once more

drawn attention to its close chemical relative, cholesterol, for although ergosterol was probably supplied from plant food in ordinary circumstances, it was possible that cholesterol itself might form an additional source in the body. The relations of cholesterol to certain important pathological problems were next considered. In nephritis, especially of the chronic parenchymatous variety, marked rises in blood cholesterol were common, and the degree of hypercholesterinaemia was usually proportionate to the degree of oedema. In cases where the oedema disappeared but the hypercholesterinaemia remained, the prognosis was generally unfavourable. Acute nephritis showed somewhat similar changes to the chronic parenchymatous form, but chronic interstitial nephritis was not accompanied by hypercholesterinaemia, unless the dominant feature of the case was arterio-sclerosis. Arterio-sclerosis alone was usually associated with a rise of blood cholesterol, and the connexion between the two, though unexplained, was interesting in view of the experimental production of atheroma in rabbits by cholesterol feeding. Unfortunately, however, these experiments had not so far been reproduced in carnivorous animals. The hypercholesterinaemia of diabetes was next considered. A suggestion as to its causation was made, and stress was laid on the fact that it formed a reliable and easily estimated measure of the degree of lipaemia, which was usually, itself, an index of progress in severe cases of diabetes. In diseases of the liver, jaundice of an obstructive nature was usually accompanied by increase of blood cholesterol, due to retention of cholesterol usually excreted through the medium of the bile, while haemolytic forms of jaundice, on the contrary, were generally associated with low blood cholesterol values. The estimation of blood cholesterol might therefore be of value in distinguishing between the two types of jaundice. A brief review of the relation of cholesterol to gall-stones followed. After dealing with current theories, it was suggested that should the liver be shown experimentally to be capable of converting cholesterol into bile salts, a failure of this function might result in increased concentration and deposition of cholesterol in the bile. There seemed little doubt that the formation of stone was due to some disturbance of cholesterol metabolism, but the nature of this disturbance was as yet unknown. Reference was then made to the low blood cholesterol values found in most forms of anaemia, and the effect of splenectomy in cases of acholuric jaundice and splenic anaemia in producing a return of cholesterol to normal values. The common presence of anaemia in malignant disease rendered low values common in this disease, though high values were often recorded in the absence of anaemia. In cancer, also, it had been found that the plasma cholesterol was greater than that for whole blood, the reverse of the state of affairs in normal people or in other diseases.

In bacterial infections of any severity, also, hypocholesterinaemia was generally present, and was usually proportionate to the intensity of the infection. This observation had been extended in cases of prostatic obstruction to determine those cases—namely, with a low blood cholesterol content—which were liable to extension of urinary sepsis. This work needed confirmation. Lastly, brief mention was made of the deposition of cholesterol in various tissues, such as the arterial walls, xanthomatosis, and in the retina or vitreous.

OPERATIONS ON THE GALL-BLADDER.

A MEETING of the Section of Surgery of the Royal Academy of Medicine in Ireland was held in the Royal College of Physicians on February 8th, with Sir WILLIAM DE COURCY WHEELER (in the absence of the president) in the chair.

Mr. R. A. STONEY read notes on a case of choledocho-duodenostomy, and gave the following clinical details.

A woman, aged 50, was admitted to hospital with a second severe attack of jaundice in the course of four months. She had an irregular temperature, but no rigors; there was at first marked tenderness of the right hypochondrium and epigastrium, which gradually lessened, revealing a hard mass in the middle line, the gall-bladder not being palpable. At the operation the gall-bladder was slightly distended, but no stones were felt in the bladder or ducts. There was a large dark blue swelling in the right border of the gastro-hepatic omentum. The gall-bladder was separated from the liver, and the cystic duct was traced into this swelling. Bile was aspirated. A free incision was made into the swelling, and bile mixed with pus was evacuated in large quantity. A finger was passed down into what felt like the os uteri in the region of the head of the pancreas, which was enlarged and very hard; no enlarged glands were palpable. Anastomosis was secured by a double row of circular sutures between the opening in the common duct and the adjacent second stages of the duodenum. The gall-bladder and cystic duct were cut away, and a drainage tube was introduced through the stumps of the cystic duct into the common hepatic duct. A small tube and strip of gauze were passed down to the line of anastomosis, and the wound was closed round the tubes. There was free drainage of bile for the first twenty-four hours only. The small tube and gauze were removed on the third day, and the tube in the hepatic duct was left out on the tenth day. The wound rapidly healed without leakages; jaundice disappeared, enlargement of the pancreas diminished, and the patient left hospital on the twenty-fourth day after operation.

Attention was drawn by Mr. Stoney to the necessity of determining whether an anastomosis would be necessary before separating the gall-bladder or seriously injuring it, since in most circumstances an anastomosis between the gall-bladder and intestine was easier than between the duct and the intestine. In cases of infection the latter operation might be more suitable, because it allowed direct drainage of the ducts on the surface as well as providing a short circuit.

Sir WILLIAM WHEELER said that in his own experience the operation of anastomosis between the gall-bladder and the stomach was, as a rule, comparatively simple; he had been struck with the fact that there was no post-operative vomiting, and that the convalescence of the patients was unhampered by any unpleasant symptoms. Difficulties arose when there had been previous operations, especially if a biliary fistula was still present. In patients who had been operated upon several times the difficulties in connexion with the surgery of the common bile duct were notorious. He had found, on one occasion, after opening the duodenum, that the introduction of an instrument in retrograde fashion had been a great help in recognizing the duct and in locating the site of a traumatic stricture. He had on three occasions performed end-to-end suture of the common duct without any post-operative trouble. In one case, a doctor who had been operated on several times for biliary obstruction without success, the duodenum was opened, and a small cyst of the common bile duct was found in the region of the ampulla of Vater. By incising the cyst the obstruction was relieved and the patient remained well.

Mr. ARTHUR CHANCE said that he recently had two cases exactly similar to those of Mr. Stoney. There was a hard mass in the head of the pancreas; the common bile duct was dilated to the size of a 10 c.cm. syringe, and had a vivid bluish-green colour. In one case he had performed cholecysto-gastrostomy, and in the other cholecystenterostomy. It was not always easy to obtain a bloodless area in the right half of the transverse mesocolon through which to bring the small intestine, and Mr. Chance thought that cholecysto-gastrostomy was, owing to its easier performance and better after-results, probably the best routine procedure.

Mr. W. DOOLIN referred to three cases in which he had employed cholecystenterostomy, and said that there had been no sign of jaundice when the patients left hospital on the thirty-seventh day after operation. In cases in which cholecystectomy had been performed previously, and in which strictures of the common bile duct were encountered, operation was very difficult. It was, he thought, almost impossible to make a differential diagnosis between cases of chronic pancreatitis and carcinoma of the pancreas.

Mr. A. A. MCCONNELL mentioned a case of congenital cystic dilatation of the common bile duct on which he had operated twelve years previously, draining the cyst satisfactorily. At the time the patient had complained of no symptoms except abdominal swelling, and the cyst had been found to contain pure bile. If he had then been more familiar with the operation of choledocho-duodenostomy, he would have performed it. In some cases which he had operated on since, he had made a primary anastomosis between the cyst of the common duct and the duodenum, and the patients had got well.

Mr. F. J. HENRY mentioned a case of a woman, aged 40, who had been ill for about six weeks with vague abdominal discomfort and jaundice. At the operation the gall-bladder was found to be moderately enlarged and the ducts moderately dilated, but no stones were visible. The duodenal wall was opened and the ampulla excised, the condition being diagnosed microscopically as a primary carcinoma of the ampulla of Vater. The patient was now perfectly well, and, in view of this, Mr. Henry was inclined to doubt whether the case was one of malignancy.

Mr. STONEY, in replying, said that in cases in which he had brought about an anastomosis between the gall-bladder and the stomach he had been impressed by the absence of vomiting after the operation, and by the easy convalescence. The relief afforded by the operation in his cases had been very considerable. He thought that a differential diagnosis between chronic pancreatitis and carcinoma of the pancreas was often impossible even after an operation had been performed. When adhesions were found after a prolonged fistula, the difficulties were so great as to be almost insuperable. He believed that the only thing to do was to try to find the dilated head of the duct, and make an anastomosis between it and the duodenum. It was surprising what good results could be obtained in these cases.

Rectal Narcosis with Tribromethylalcohol.

Mr. F. J. MORRIN read a paper on rectal narcosis with avertin (tribromethylalcohol). He said he had used this in 54 cases—too few, perhaps, for any general deductions. The oldest patient was 69 and the youngest 3 years old. Excluding four cases in children where the anaesthetic was unsatisfactory owing to non-retention of the enema, anaesthesia failed in only one case, an alcoholic subject. It was light in eight cases, but did not hinder the completion of the operation; the results were good from the operative standpoint in the remainder of the cases, though of course of varying depth. Two patients had a marked fall of blood pressure, long post-operative sleep, and a weak and rapid pulse, which was not restored to normal for four days; the symptoms were obviously due to overdosage. Thirty-six of the patients were cases of advanced carcinoma of the tongue and face; they were suffering from cachexia and were extremely bad anaesthetic subjects, being unsuitable for any other form of anaesthesia. The condition was the so-called "inoperable carcinoma" and was treated by diathermic coagulation with a very powerful diathermy apparatus; it necessitated very deep anaesthesia, and the danger of ignition contraindicated ether. Avertin, in addition to securing effective anaesthesia by allowing accessibility to the growth and free intraoral manipulation, rendered the surgical treatment of these conditions very satisfactory. Mr. Morrin said he had been most favourably impressed with the efficacy of the new drug, which he considered the anaesthetic of choice in toxic goitre. A brief experience with avertin amylene hydrate led him to regard it as a more effective anaesthetic agent, giving better abdominal relaxation, more certain anaesthesia; it was not associated with shallow respiration, and was less liable to be attended with a fall of blood pressure. No post-operative bronchitis or pneumonia was observed, despite the fact that many of these aged patients were operated upon for disease of the mouth and pharynx. Mr. Morrin said that care was necessary in preparing the solution accurately, and the dose of 0.1 gram per kilo of body weight was only rarely exceeded. When it was necessary to increase the dose cautious fractional administration was advised. Where the body weight was decreased by the operative removal of a large amount of tissue in a subject of poor vitality, overdosage with avertin might possibly occur, as, for example, in the case of amputation of a limb.

Sir WILLIAM WHEELER thought that Mr. Morrin's enthusiasm for the drug was justifiable. The patient apparently passed into a somnolent state within ten minutes; this contrasted sharply with anaesthesia with oil ether, the great difficulty about which was the varying time it took to act. An operation under this anaesthetic could not be timed within three-quarters of an hour, since some patients went under much quicker than others. There was apparently no antidote for avertin, and there was a greater fall in blood pressure than when oil ether was used. The better administration of avertin was, he thought, a matter of experience. He was interested to note the absence of post-operative symptoms following its use, since after oil ether the patients were sometimes very sick and some developed bronchitis.

Dr. J. BECKETT said that there seemed to him to be a great deal of complicated technique in the giving of avertin. This was not the case with the oil ether method, which was very simple.

Mr. W. DOOLIN congratulated Mr. Morrin on being the first surgeon outside Germany to have had an opportunity of testing the new drug. The intention of the German authorities that avertin should not be available for general use until it had been given an exhaustive trial in competent hands was praiseworthy. Opinions in Germany as to its employment were very divided; it was used either as a basal narcotic, preceded by other narcotic substances, and with additional ether administration, or else as the sole narcotic medium, and it was in the latter group that most accidents had occurred. To judge from published reports the difficulties of administration were rather more serious than Mr. Morrin had stated; it had been repeatedly said that even slight errors of technique might lead to serious effects in patients. The chief dangers were overdosage and overheating. The rapid fall of blood pressure had led to fatal secondary haemorrhages in a few cases, and fatal necrosis of the colon had been reported as the result of overheating the drug before injection. Many observers working with the drug had admitted that the chief disadvantage was the fact that it was impossible to "steer" the anaesthesia so produced. Some had considered that the dosage by body weight was unsatisfactory; it was impossible to state at any time how much of the drug injected had been absorbed into circulation. Its advantages were enormous when the anaesthesia was successfully performed. The abolition of vomiting during and after the operation was beneficial to the patient, particularly so in the case of children. Reports in German literature during the past two years showed a marked falling off of post-operative pulmonary complications. There seemed little doubt that, notwithstanding these dangers, avertin was a great step forward in the technique of anaesthesia.

Dr. P. MACCARVILL, who had assisted Mr. Morrin when he started using avertin, said that a 3 per cent. solution had been used, but it had been found difficult to get the powder to dissolve, and later they had used a 2.8 per cent. solution, which was sufficient to be retained by the rectum. The fluid was heated first to 45°C. and cooled to 40°C. The thirty-six cases in which he had assisted Mr. Morrin had all been malignant, mostly carcinoma of the tongue, and these were very difficult cases for anaesthetics. He personally thought that ether was out of the question in such cases, and gas was reported to be bad. On the first occasion he had given avertin he had felt rather alarmed, as the patient's blood pressure had fallen considerably, and the breathing had become extremely shallow, but the operation had been quite successful. When administered with care he regarded avertin as an invaluable anaesthetic.

Mr. A. A. MCCONNELL referred to the possibility of using diathermy in the mouth when rectal ether was being employed; he had been doing so for many years, and had not, at any time, experienced any difficulty.

Mr. MORRIN, in replying, said that he had obtained the avertin from a clinic in Berlin. He had tried rectal oil ether extensively, and thought that there was no comparison between the two anaesthetics. There were many dangers from oil ether also. There was no great technical difficulty in preparing avertin. The mortality following its use had occurred in the early stages, when too big doses had been given, and when it had been used in hepatic disease and in renal cases, which were quite unsuited to it. He had only had one case in which it had not been possible to complete the operation; that was an alcoholic case, and it was not realized then that such patients were not suited to the drug. In cases where the blood pressure fell very low, he had found that ephedrine controlled the fall. He had never seen a case of secondary haemorrhage occur.

Reviews.

DEFORMITIES.

IN his foreword to Dr. M. F. FORRESTER-BROWN'S handbook on the *Diagnosis and Treatment of Deformities in Infancy and Early Childhood*,[1] Sir ROBERT JONES very properly insists on the value of the work and commends it to a large audience. Dr. Forrester-Brown has had a remarkably wide experience of orthopaedic practice in the United States, and in many European countries, where she has used a travelling scholarship to the fullest advantage. In her own preface she defines the book as "a supplement to the larger textbooks of orthopaedics, or more properly as a sort of scout to prepare the way for them." Every orthopaedic surgeon knows how many hospital beds are filled with cases which, properly attended to in their early stages, would never have had to come into hospital at all, or, being there, would have required far less severe or prolonged treatment. Dr. Forrester-Brown's book aims at the education of medical practitioners in the recognition of deforming diseases in their early stages, and in the practical application of the old saw "a stitch in time saves nine."

The subject-matter is arranged on a regional basis, under five headings. The first of these is the neck, back, and thorax, in which subject Dr. Forrester-Brown is thoroughly at home. As a disciple of Goldthwait of Boston, she has done at Bath much good work on postural errors, and has had most gratifying results, some of which are illustrated in this section, in the restoration of muscle tone and the consequent correction of errors of attitude. The remaining four sections deal briefly but clearly with the shoulder and elbow, the forearm and hand, the hip-joint and knees, and the feet. While there is no attempt to describe all the known affections of a part, there are succinct accounts of most of the conditions likely to be encountered, for fuller details the reader being referred to the large works on orthopaedic surgery. In the last forty-three pages the author sets forth the principles of treating deformities of the legs and feet. Here we think she does not give enough credit to the curative action of steel instruments, when these are intelligently designed and properly fitted. The brilliant results of operations, and the increased and more intelligent application of plaster-of-Paris, have led to some neglect of the work of earlier orthopaedic surgeons in the use of "walking instruments," but we must do Dr. Forrester-Brown the justice of noting that she states that in many cases knock-knee of considerable severity can be corrected with calliper splints.

This book is a short one, the descriptions and directions are clear, and the illustrations instructive. The busy practitioner should therefore be able to find the time to read it and to refer to it whenever he is confronted with a case of suspected or obvious deformity. Widespread use of such a work should in time diminish the crowd of cases which have to be treated in hospitals by specialists at the expense of the charitable public and the overburdened ratepayer or taxpayer.

LABORATORY WORK ON TUBERCULOSIS.

THE introduction to Dr. H. S. WILLIS'S book, *Laboratory Diagnosis and Experimental Methods in Tuberculosis*,[2] has been written by ALLEN K. KRAUSE. After such an accolade, the value of which will be appreciated by tuberculosis workers all over the world, the reviewer's task may seem redundant. This book of 330 pages consists of five parts; in the first we find a description, mainly from the clinical aspect, of the secretions, excretions, and constituents of the body in so far as they relate to the diagnosis and treatment of tuberculosis. The second part deals with the various methods of detecting the tubercle bacillus, and with its isolation and cultivation; it is therefore mainly a description of laboratory technique. The third part is devoted to diagnosis by tuberculin, and again the subject is considered mainly from the clinical aspect. Serological diagnosis occupies the short third part; there is a chapter by Dr. J. S. WOOLLEY on complement fixation, and another on the remaining serological tests and their value. This section might, with advantage, be considerably elaborated. Finally, a description is given of the technique of the various methods of studying artificially produced tuberculosis in animals. The material is good, but Dr. Willis's book is either too big or too little. He mentions in his preface that it is intended for "practising physicians, public health officials and laboratory workers in general, and medical students." The practising physician would welcome more information on the clinical application and value of the tests mentioned, and be content with less about the laboratory technique; the laboratory worker would probably prefer the balance shifted in the opposite direction; the medical student would like the whole subject-matter condensed and set out more dogmatically. The person who will most appreciate the book as it stands is the isolated sanatorium physician who has to do his own laboratory work; but even he, realizing the author's wide knowledge of the clinical pathology of tuberculosis, will regret its condensation. In these days of specialization it is unusual to find a book that contains a mixture of clinical and laboratory teaching, without going very deeply into either; its welcome will depend on the personal opinion and wants of its readers. The author's style is clear and pleasant, the illustrations are good, and the type is legible, but printer's errors are rather frequent.

Dr. ANDRÉ BRETON has contributed a very useful addition to the literature of tuberculosis by placing on record a careful clinical study of Vernes's flocculation reaction of serum in the presence of a resorcin solution.[3] In Dr. Breton's hands this test has proved valuable in the diagnosis and prognosis of all forms of tuberculosis, and especially of the pulmonary type. Like other laboratory tests, such as that based on the red cell sedimentation rate, its value in diagnosis is restricted, and is mainly negative, since nearly all acute and many chronic infections give positive reactions. The chief claim made by the author for this reaction is that it provides an accurate index of the activity of the tuberculous infections in 90 per cent. of the cases examined; this is as near accuracy as any serum test can go. Dr. Breton is enthusiastic about the method, but level-headed and fair in the conclusions he draws. His zeal has tempted him to put up a dummy in the shape of the complement fixation reaction, with which he has compared the Vernes reaction in every case, but the complement fixation reaction is not generally considered of any particular value in tuberculosis, either for diagnosis or as an index of activity. Dr. Breton's work on the Vernes reaction is good enough to stand on its own merits, and gains nothing by the comparison. The performance of the test might have been dealt with in greater detail, and especially the technique of the photometric method of reading the results. In describing the method he gives a useful warning that the blood serum must be taken from a patient who has fasted for twenty-four hours and who has had no drugs for seventy-two hours, and that it must be examined before it is twenty-four hours old if the results are to be of any value. Does the Vernes reaction merely confirm the clinical estimation of a case, or does it give premonitory warning of increase or decrease of activity of infection? The author tells us he does not yet feel justified in answering his questions. This is a valuable, well-printed monograph containing a full bibliography of the subject.

[1] *Diagnosis and Treatment of Deformities in Infancy and Early Childhood.* By M. F. Forrester-Brown, M.S., M.D.Lond. With a foreword by Sir Robert Jones, Bt., K.B.E., C.B., F.R.C.S. Oxford Medical Publications. London: Milford, Oxford University Press. 1929. (Demy 8vo, pp. xii + 199; 79 figures. 14s. net.)

[2] *Laboratory Diagnosis and Experimental Methods in Tuberculosis.* By Henry Stuart Willis. With a chapter on Tuberculo-complement Fixation by J. Stanley Woolley. Introduction by Allen K. Krause. London: Baillière, Tindall and Cox. 1928. (6 × 9½, pp. xxv + 330; 25 figures. 16s. net.)

[3] *Étude de la Réaction de Vernes à la Résorcine dans le Diagnostic et le Pronostic des Tuberculoses.* Par André Breton. Paris: Masson et Cie. 1928. (6½ × 10, pp. 152. 20 fr. sans majoration.)

EPILEPSY.

DR. W. G. LENNOX and DR. STANLEY COBB are to be congratulated on having published as a monograph their review of *Epilepsy*,[4] which recently appeared in *Medicine*. They indicate in a subtitle that the scope of their work is confined to "the standpoint of physiology and treatment," and they rightly recognize that a knowledge of the physiology of convulsions is fundamental to the study and treatment of epilepsy. It is the difficulty of the physiological problems involved which renders progress so slow in this field of neurological research. The authors wisely begin by defining epilepsy as a syndrome rather than as a disease, leaving open the question of the relative importance of general and focal factors in its etiology. A valuable discussion of the possible neurological mechanisms of convulsions follows. A large part of the book is devoted to a consideration of the evidence for and against the existence of abnormalities outside the central nervous system in epileptics. The various systems of the body are serially reviewed, and the large number of recent investigations into the metabolism of epileptics are judicially discussed. Special consideration is given to disturbances of acid-base equilibrium and the reduction of the seizures by induced acidosis. Dr. Lennox and Dr. Cobb conclude that, in spite of the frequent occurrence of organic cerebral abnormalities of various kinds in patients suffering from epilepsy, such lesions are contributory causes only. A knowledge of the functional abnormalities of nervous tissue is essential for further progress. The evidence indicates that in certain epileptics subject to frequent seizures these may be precipitated by oxygen lack and by alkalosis, and prevented by increased oxygen tension in the tissues and by acidosis. Yet these physiological changes are also to be regarded as merely contributory factors. "The important question yet remains, why, under a given stimulus, one person should have a seizure and another not." Hence we are led to postulate some unknown constitutional element. This "convulsive capacity" is presumed to be present in each person with epilepsy, and hence there is justification for the conception of "essential epilepsy" as a name for that underlying explosive tendency to which cerebral lesions and metabolic abnormalities act only as triggers. This constitutional element remains for the present a mystery. This conclusion, derived from the labours represented by some six hundred references, may seem somewhat disheartening. Nevertheless, we may find encouragement in the tendency of recent research to concentrate on factors influencing the reactivity of the nerve cell, for it is in this direction that we must surely look for further light upon the convulsive predisposition.

X-RAY DIAGNOSIS OF ECHINOCOCCUS CYSTS.

As a supplement to *Acta Radiologica* DR. GUNNLAUGUR CLAESSEN publishes in book form a monograph entitled *The Roentgen Diagnosis of Echinococcus Tumors*.[5] The author, as a justification for this work, observes that although there are a good many papers on the subject to be found in various journals they are all very scattered, and his endeavour has been to collect in one place the sundry experiences related by other authors in this branch of radiology, and to add to the subject his own experiences of forty-four cases which he has himself examined with *x* rays. While the radiological aspect of the subject is the most prominent, other points are by no means overlooked, and chapters are included which deal with the biology and morphology of the echinococcus, with the geography of the disease, with the pathological changes apt to occur in the cysts, etc. The book deals mainly with the disease as it affects the liver, and there are few references to cysts in other parts of the body. The methods of *x*-ray examination are explained, and the various radiological appearances examined from the points of view of their reasons and their diagnostic value. In summarizing, the author states that out of his forty-four cases, thirty-seven were cysts of the liver, and that twenty-eight were verified by operation; that pathological changes in the cysts due to either senility or to infection are common, and that these affect the *x*-ray picture. The illustrations consist of four figures in the text and eighty-two radiographs and photographs bunched together at the end. This method of putting all the illustrations together at the end with no descriptions other than those in the text is irritating; if illustrations are to be inserted in this manner there should be a short description attached to each, and not merely a reference number. We may say that these illustrations are very good. There are, in addition, short summaries in German and French, and references to one hundred and thirty-seven papers. The English translation is by Robert Fraser. The whole forms a very complete account, radiologically and otherwise, of a comparatively rare disease, and should be of use to those interested in the subject.

ANNALS OF MEDICAL HISTORY.

WITH the fourth instalment of last year the first series of the *Annals of Medical History*,[6] started in America in 1917, comes to an end. But fortunately for lovers of medical history this beautifully got-up journal, edited with so much devotion by Dr. FRANCIS PACKARD, is to be continued in a second series with a different format ($7\frac{1}{2} \times 11$ instead of $8\frac{3}{4} \times 12\frac{1}{2}$) but without any reduction in the reading matter, for there will be six instead of four numbers in the year. Although most successful from a literary standpoint the *Annals* do not pay their way. It is to be hoped that the increasing number of medical men who take an interest in the history of their profession will come to the rescue. The present number is so full of attractive matter that space does not allow of even a complete enumeration of the contents. Three articles deal with last year's tercentenary of the publication of the *De Motu Cordis*; the editor gives a running account of the Harvey celebration in London last May; Professor J. J. R. Macleod, now of Aberdeen, publishes his well-illustrated address on Harvey's experiments on the circulation; and the frontispiece of Michael Servetus has a bearing on Sir Humphry Rolleston's admirable Mary Scott Newbold Lecture on the predecessors and contemporaries of Harvey, which appears as the opening paper. The portrait of Benjamin Rush on the cover is accompanied by Dr. W. S. Middleton's account of the doings of this great physician during the yellow fever epidemic of 1793 in Philadelphia. From a study of the notes taken in 1818 at the lectures, on the practice of physic, of Nathaniel Chapman, professor of medicine from 1816 to 1850 in Philadelphia, Dr. D. L. Farley sketches the activities of the founder of what afterwards became the *American Journal of the Medical Sciences*. The editorship of a rare anthology entitled *A Full View of all the Diseases Incident to Children* (erroneously ascribed to John Martyn in the eighteenth century) is discussed by Dr. Ernest Caulfield, who also sketches the writers quoted in the volume. Dr. LeRoy Crummer now publishes the manuscript of William Heberden's "Introduction to the Study of Physic," which, like the "Prefatory Essay," brought out in the last number of the *Annals*, is now for the first time printed. In his historical survey of diabetes, which is carried up to the present day, Dr. J. H. Barrach rightly points out that more has been learnt about this disease during the last forty years than in the previous eighteen centuries. In philosophical vein Dr. Stephen D'Irsay discourses on the evolution of the physician's attitude, and rather curiously the article immediately preceding it is Dr. W. E. Aitchison Robertson's well-told story of the famous Mary Tost, who pretended to be the mother of many rabbits. Under the title of "The Evolution of our Table" Dr. Cecil Striker treats of ancient habits of diet. An extremely interesting article, "The Sponge, its Effect on the Martyrdom of James King of William" (the remarkable nature of this reformer's name being duly explained), describes the lurid

[4] *Epilepsy*. By William G. Lennox and Stanley Cobb. Medicine Monograph, vol. xiv. London: Baillière, Tindall and Cox. 1928. (Med. 8vo, pp. 197; 14 figures. 16s. net.)

[5] *The Roentgen Diagnosis of Echinococcus Tumors*. A study by Gunnlaugur Claessen. *Acta Radiologica*, Supplementum vi. Stockholm: P. A. Norstedt and Söner. 1928. ($7\frac{1}{4} \times 9\frac{3}{4}$, pp. 153; 4 figures in the text and 82 figures on 32 plates.)

[6] *Annals of Medical History* (Winter Number, 1928), vol. x, No. 4. Edited by Francis R. Packard, M.D. New York: Paul B. Hoeber, Inc.; London: Baillière, Tindall and Cox. 1928. ($8\frac{3}{4} \times 12\frac{1}{2}$, pp. 323-511; illustrated. Subscription in Great Britain 42 2s. per volume of four numbers.)

state of San Francisco in the fifties, which King, who "dared to say what others feared to think," strove to correct, and, indeed, by his death accomplished. Dr. Jonathan Wright, an ever-faithful contributor, writes on "The Foundations of Science and Religion in Dante's Debt to Aristotle," Dr. Alfred Brown on John Arderne, and Dr. J. L. Bragman on the "Medical Wisdom of De Quincey."

THE COMMON COLD.

IT is at a very appropriate time that Dr. LEONARD HILL, who has done so much in the way of applying physiological guidance to the maintenance of health, and Mr. MARK CLEMENT have brought out a book on *Common Colds: Causes and Preventive Measures*,[7] so clearly written that the layman can read and benefit from the inward digestion of its contents. After some introductory remarks on the anatomy and physiology bearing on the subject and a chapter on the psychological aspect of catching cold, there follows a discussion of the causes of colds; the factors favouring infection are fully set forth, and, as elsewhere in the volume, the importance of fresh air as a means of avoiding infection is brought out. The most infectious stage of a cold is the earliest, before the second or wet stage has come on. An incidental reference is made to non-contagious colds, not due to infection from other cases, but caused by irritating agents and vapours, of which tobacco has been incriminated as one of the commonest. Vasomotor catarrh and coryza due to hypersensitiveness are briefly touched upon, and in speaking of influenza the suggestion is thrown out that the great plague of Athens in 429 B.C. may have been of this nature. The treatment of this too familiar ill by salicin, as advocated by Mr. E. B. Turner, and by methyl arsenate of sodium (arrhénal), said by Romary to be a specific, is summarized. As already mentioned, much stress is laid on the prevention of colds by fresh air, diet, light, and proper clothing. The discordant opinions as to the value of vaccine therapy are also quoted. With regard to curative treatment it is pointed out that the original dictum "If you are fool enough to stuff a cold, you will produce and have to starve a fever" has in its abbreviated form come to imply almost the exact opposite as regards the treatment of a common cold. The various methods of attempting to cure a cold are noticed, and approval is expressed of the old-fashioned plan of a Dover's powder and hot lemonade to increase sweating, and Epsom salts next morning. Support is not given to much whisky as a remedy.

NOTES ON BOOKS.

MRS. CALLOW'S *Food and Health*[8] is a volume that sets out, in a straightforward and sensible manner, some of the important facts about diet that should be understood and appreciated by the public. There is every reason why persons of average intelligence should learn the simpler facts upon which the science of dietetics is based, to the benefit of both their comfort and their pocket. On the economic side the general reader's attention might be drawn to the section that deals with patent foods.

Dr. J. K. WATSON'S *Handbook for Nurses*[9] is the weightiest book for its size with which we are acquainted. This makes it tiring to read, but is accounted for by the author's attempt to give in one volume all the information that nurses can possibly require. To this end a new chapter on mental disease has been added to the present edition, the eighth, of the book, together with one hundred new illustrations. The issue to date of 95,000 impressions of the work attests the publishers' claim that it is a standard textbook; but if further editions are called for a distribution of weight between two volumes might aid the nurse's comfort. Another book on the same subject, Miss MARGARET S. RIDDELL'S *Lectures to Nurses*,[10] has reached its third edition. To this book also much new matter has been added, including sections on surgical tuberculosis, on the nursing of special operations, and on new growths. A useful additional feature is a glossary of technical terms. This will doubtless be increased and improved in future editions. At present there seems no reason why a nurse should be told the meaning of the popular term "quinsy," and left to imagine what the equally non-technical word "carbuncle" denotes. The introduction, while advocating tactful treatment of doctors, instils proper awe in the presence of a matron.

The comparative anatomy and development of the nervous system is always a most fascinating subject to those who have the knowledge to appreciate it, and it is to those few that ARIËNS KAPPERS'S *Three Lectures on Neurobiotaxis and other Subjects*[11] will appeal. There are three lectures, the first dealing with neurobiotaxis, the second with the phylogenetic and ontogenetic development of the corpus striatum, and the third with the development of the cerebral cortex and the functions of its different layers. These three lectures were delivered at the Universities of Copenhagen, Lund, and Upsala in 1927, and are reprinted from the *Acta Psychiatrica et Neurologica*.

The forty-eighth volume of the *Transactions of the Ophthalmological Society of the United Kingdom*[12] embodies the full text of the various communications read before the society during the session ended April, 1928, together with the reports of the transactions in 1927–28 of the affiliated societies, which include the Midland, North of England, Irish, and South-Western Ophthalmological Societies, and the Scottish Ophthalmic Club, and of the proceedings of the Oxford Ophthalmological Congress, 1928. The volume, which is well printed and illustrated with numerous photographs, line drawings, and coloured plates, is in every way a credit to British ophthalmology.

In publishing *Typical Flies*,[13] of which the third series is now before us, Mr. E. K. PEARCE'S purpose is to present photographs of British diptera so as to assist the student, especially when he is commencing to study these insects. Some of the photographs are helpful, because they give a general impression of the appearance of the insect, but many of them are indifferent; even the venation is out of focus in some, though that is one of the few "characters" which should be easily reproduced in a photograph. Many small points of importance in the systematics of the diptera cannot be adequately shown in a photograph. The short notes beneath the figures add little to the value of the book; there must be a thousand British insects which might be described as "a black fly, pupa dark brown."

INFANT FEEDING: A CORRECTION.

IN our review of Dr. Howard Gladstone's *Clinical Observations on Infant Feeding and Nutrition* (February 23rd, p. 357), we stated in error that the author, in giving the calorie values of diets, had failed to indicate whether these values refer to an ounce, a feed, or a day. In a cross-heading, on page 34, he makes it clear that the reference in each case is to one pint.

[7] *Common Colds: Causes and Preventive Measures.* By Leonard Hill, M.B., F.R.S., and Mark Clement. London: W. Heinemann (Medical Books) Ltd. 1929. (Demy 8vo, pp. viii + 126; 9 figures. 7s. 6d. net.)

[8] *Food and Health.* By A. Barbara Callow. The World's Manuals. London: Milford, Oxford University Press. 1928. (Cr. 8vo, pp. 96; 9 figures. 2s. 6d. net.)

[9] *A Handbook for Nurses.* By J. K. Watson, M.D.Ed. Eighth edition, revised. London: Faber and Gwyer, Ltd., The Scientific Press. 1928. (Cr. 8vo, pp. xii + 898; 299 figures. 8s. 6d. net.)

[10] *Lectures to Nurses.* By Margaret S. Riddell, A.R.R.C., S.R.N. Third edition, enlarged. London: Faber and Gwyer, Ltd., The Scientific Press. 1928. (Cr. 8vo, pp. xii + 518; 61 figures. 6s. net.)

[11] *Three Lectures on Neurobiotaxis and other Subjects.* By C. U. Ariëns Kappers. London: W. Heinemann. 1928. (6½ × 9¼, pp. 76; illustrated. 7s. 6d. net.)

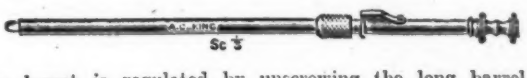
[12] *Transactions of the Ophthalmological Society of the United Kingdom.* Vol. xlviii. Session 1928. London: J. and A. Churchill. 1928. (Demy 8vo, pp. xlviii + 485; illustrated. 30s. net.)

[13] *Typical Flies: A Photographic Atlas of Diptera.* By E. K. Pearce, F.L.S., F.E.S. Series iii. London: Cambridge University Press. 1928. (7¼ × 10½, pp. xv + 64; 162 figures. 10s. net.)

PREPARATIONS AND APPLIANCES.

LANCET FOR PERITONSILLAR ABSCESS.

MR. A. A. MILLER, assistant out-patient registrar, Central London Throat, Nose and Ear Hospital, writes that the instrument illustrated—a modification of the well-known blood-letting lancet—has been devised to meet the difficulties so often experienced in opening a peritonsillar abscess; he has found it very reliable. The length



of the lancet is regulated by unscrewing the long barrel into which it is fitted. By pulling the handle the lancet is made to disappear in the barrel, and at the same time a spring is compressed by a special device which keeps the lancet under tension in the desired position; the tension itself can be regulated. On pressing the handle the action of the spring is released and the lancet let loose with considerable force, thus producing a sharp and instantaneous cut. The manipulation of the instrument is very simple. It is made by Messrs. Charles King of Devonshire Street, W.

INTRACRANIAL SURGERY.

A STUDY of Intracranial Surgery, based upon the work of Dr. Harvey Cushing's clinic at the Peter Bent Brigham Hospital, Boston, has been prepared for the Special Report Series[1] of the Medical Research Council by Mr. Hugh Cairns, who was assistant resident surgeon to the clinic during the period 1926–27. Dr. Cushing's clinic is devoted solely to the study of neurological surgery, all its members being trained both in the details of neurological examination, including perimetry and ophthalmoscopy, and in the performance of intracranial operations. During the period under review 463 cases were admitted to the clinic, of which 359 were classified in the "intracranial tumour group." On 284 members of this group major intracranial operations were performed, with the remarkably low operative mortality of 9.8 per cent. The operative mortality in intracranial surgery is, in Dr. Cushing's view, largely what the surgeon wishes to make it; he may achieve a low mortality by the exercise of due caution, a high mortality by attempting radical operations on tumours difficult of access.

Pathology of Tumours.

From a table showing the pathology and situation of all the verified brain tumours which came to operation or necropsy, it is evident that the commonest tumour was the glioma, which was found with equal frequency in the cerebrum and the cerebellum. In the cerebrum the commonest sites were the frontal, temporal, and parietal lobes. Next in order of frequency was the meningioma, whose site of election was the parietal lobe and the juxta-ampullary region. Adenomata and adeno-carcinomata, also occurring in the juxta-ampullary region, are almost as frequent as meningiomata. It is worthy of note that though in discussing the histology of brain tumours, especially of gliomata, the work of Cushing and Bailey is referred to at length, no mention is made of the excellent work of Greenfield in this country.

The Need for Immediate Treatment.

Mr. Cairns, in considering the treatment of intracranial tumours, reaches the conclusion that all brain tumours must be regarded as emergencies, no matter how mild their symptoms may be when they first come under observation. The onset of grave symptoms may be extremely sudden, and it is impossible to predict at what period in the course of a case such symptoms will supervene. Early treatment is required, moreover, in view of the papilloedema and optic atrophy. Loss of vision is apt to be insidious and scarcely noticed until the final stages, when it may occur with astonishing rapidity, even in the course of a few days only. Dr. Cushing maintains that the surgeon must shoulder the responsibility of acting on his own diagnosis, a view which is in accordance with the teachings of Horsley, Macewen, and Sargent in this country.

Methods of Clinical Examination.

It is estimated in the report that fully 40 per cent. of intracranial tumours, chiefly of the pituitary and acoustic nerve, give rise to definite clinical syndromes. The need for thorough systematic examination of each case is made evident by the fact that approximately 4 per cent. of all brain tumours are metastatic, the common sites for the primary focus being the breast, lungs, kidneys, and skin.

The administration of hypertonic salt solution, either intravenously or rectally, is advocated very strongly in those cases which are admitted in a state of coma, on the ground that it causes the brain to shrink in size and thus reduces intracranial tension. In cases suffering from minor degrees of drowsiness it is sufficient to administer magnesium sulphate, by mouth if possible, or, if the patient is liable to vomit or is unable to swallow, by rectum. Within six to twelve hours the patient will have become brighter and more co-operative, though in view of his liability to tire quickly great care will be needed to shepherd him through a complete neurological examination. No harm has ever resulted from the use of this method.

[1] Special Report Series, No. 125. Medical Research Council. His Majesty's Stationery Office. 1929. 3s. net

The Prevention of Blindness.

In every patient admitted a complete examination of the fundus oculi is undertaken. This examination is of paramount importance, as in many cases of intracranial tumour the chief aim of treatment is to preserve vision. In cases of slow-growing tumours, so situated that they may cause pressure effects on the optic nerves or chiasma without producing hydrocephalus, there may be for years few or no symptoms save progressive failure of vision. Of the cases under review 44 were admitted almost totally blind, vision being reduced to 20/100 or less in both eyes, and 27 were blind or almost blind in one eye. Neglect of ophthalmoscopy may result in failure to detect the presence of a tumour until vision is gravely damaged. Investigation of the visual fields is almost as important as the examination of the fundi. In Dr. Cushing's clinic the workers depend almost entirely on perimetry to differentiate between cerebellar tumours and those not infrequent temporal and occipital tumours which give cerebellar signs.

Radiography.

Another very important aid to diagnosis of intracranial tumour is the *x*-ray examination. The tumours most likely to give positive *x*-ray findings are adenomata of the pituitary and intracranial meningiomata, the former giving rise to enlargement of the sella turcica, the latter in many cases to erosion and increased vascularity of the bone, or to diffuse thickening and enlargement of the meningeal vessels. Ten per cent. of the gliomata in the clinic showed calcareous deposits. During the year under review 35 per cent. of intracranial tumours were revealed by means of *x* rays. Ventriculography, or *x*-ray examination of the ventricular system after the injection of air, was employed in 37 cases, the method being reserved for those cases in which all other means had failed to reveal the situation or presence of a tumour.

Treatment.

Underlying Cushing's surgical procedure are three main principles: (1) to avoid injury to the brain; (2) haemostasis; and (3) asepsis and closure of the wound. Very long operations, far longer than any of the operations of general surgery, are rendered possible by the application of these principles. The average length of an intracranial operation in Cushing's clinic is about three hours, while some operations last as long as six or seven hours. Whenever possible local anaesthesia is used, and the greater part of the operating is done without general anaesthesia. By means of the local anaesthetic used—namely, a 1 per cent. solution of novocain to which a small amount of adrenaline has been added—it is claimed that complete anaesthesia of the scalp can be obtained. Osteoplastic flaps made with the aid of an electrically driven burr or perforator and a Gigli saw are the usual means of opening the skull. The use of the high-frequency current is advocated, not merely for haemostasis, but for the removal of tumours.

Conclusion.

Mr. Cairns's valuable account of intracranial surgery is illustrated by a number of excellent skiagrams and clinical pictures. The list of references in the report is fairly extensive, but we must express regret at the almost complete omission of the names of English neurological surgeons, although these have added considerably to the literature during the past ten years.

The Antiseptic, a monthly journal of medicine and surgery issued from Madras, is about to complete the twenty-fifth year of its publication. In an essay entitled *The Antiseptic through a Quarter of a Century*, which has been prepared by the editor, the Hon. U. Rama Rau, as a supplement to the silver jubilee issue to appear in April, an account is given of the various contributions made by this periodical to the progress of medicine in India. Among these he claims the raising of the status of members of the medical profession, especially of those engaged in the subordinate medical services, the regularization of the practice of lay vaccination, the suppression of quackery, the promotion of public health legislation, and the improvement of medical education in India. He concludes by exhorting members of the medical profession in India and abroad to cast away all racial and geographical prejudices, and to work for the common interest of suffering humanity.

British Medical Journal.

SATURDAY, MARCH 2ND, 1929.

FIRST APPEARANCES IN EUROPE OF EPIDEMIC ENCEPHALITIS.

To appreciate fully the peculiar interest and significance of Professor René Cruchet's latest contribution[1] to the literature of encephalitis lethargica it is necessary to recall the first communication on the subject which this eminent French neurologist, in association with F. Moutier and A. Calmette, published in 1917 (*Bull. et. Mém. Soc. Méd. des Hôp. de Paris*, xli, 614). It was while serving in the French army as a specialist medical officer at Commercy and Verdun from September, 1915, to February, 1916, and afterwards as director of the neurological clinic in the Central Hospital at Bar-le-Duc, that Cruchet and his colleagues began to notice among the troops cases presenting symptoms of encephalo-myelitis, which did not, however, conform with those of any then known disease. A preliminary note which, in addition to a general description of the forty cases as regards onset, evolution, etc., enumerated the several clinical types observed (mental, meningo-encephalitic, convulsive, choreic, hemiplegic, cerebellar and ponto-cerebellar, bulbo-protuberential, medullary, and polyneuritic), was sent to the Société Médicale des Hôpitaux de Paris on April 1st, 1917; the note was published by the society on April 27th of that year, a few days before Professor von Economo's classic paper (Encephalitis Lethargica, *Wien. klin. Woch.*, 1917, xxx, 581) on his thirteen cases appeared in print. "Mais cette communication venait sans doute avant son heure," Professor Cruchet now writes, in his present conclusions, concerning his first effort to establish his claim. Certainly the joint note of the French observers was, at the time, strangely overlooked in favour of Economo's description of a much smaller number of cases. As Professor Achard suggests in his graceful preface to the present work, this was probably due to the fact that, while the French note described a malady with many diverse forms, the Austrian author laid emphasis upon a single, though characteristic, form of the disease, so giving the impression of "une maladie très simple dans ses symptômes." There was probably much also in the name given to the obscure disease, and the comprehensively correct, though somewhat unwieldy, term "encéphalo-myélitie subaiguë" did not strike the imagination like Economo's more arresting and more euphonious title. "L'encéphalite léthargique" (encephalitis lethargica), as Professor Achard remarks, "conquit d'emblée la faveur des cliniciens." In 1920 Professor Cruchet and his colleagues published the after-histories of some of their earlier cases; in the pamphlet under consideration, and in response to general requests, he now publishes full notes of all the cases seen between September, 1915, and July, 1917. It is a document of considerable interest from several points of view. Except for the well-described case of an English nurse, attacked while on duty at Souilly, all the 64 patients were soldiers on active service, and it is interesting to note that they constituted 3.1 per cent. of the total 2,010 cases of mental and nervous cases coming under the author's observation at the time.

It is remarkable that no series of cases comparable with that occurring in the north-west of France was reported from any other military area during the war; Cruchet thinks, however, that the disease was present on other fronts and in other armies, but that it remained undiscovered. In supporting this contention he refers to cases among ex-soldiers reported in the general literature where the primary attack occurred during military service, and also to his own acquaintance with many French war pensioners suffering from Parkinsonism whose original illness was contracted on fronts as wide apart as Morocco and the East. In this connexion we may recall to our readers' memory an article published in these columns six months ago on the possible introduction of the disease from China.[2] Reverting to the clinical narratives in the present document, it can be said that, apart from the first seven cases—concerning the diagnosis of which Professor Cruchet is himself in some doubt—the series of cases, marshalled in their original groups, shows a remarkably correct forecast of the various clinical guises which further experience has often proved the disease can assume. The occurrence of four hemiplegic cases, as reported in England by Buzzard and Greenfield,[3] may be quoted as one instance among many. These original case-histories speak for themselves, and if further evidence is required to show that the majority of patients enumerated did indeed suffer from the infection now known as encephalitis lethargica, it is provided by the summaries which have been added to each case; from these it appears that roughly one-third of the patients were reviewed as late as May, 1928, and were then found to be suffering from Parkinsonism and other forms of chronic encephalitis lethargica.

Reviewing the story as it has now been brought to light, there seems to be no doubt that, while the disease was discovered more or less simultaneously by independent pioneer workers in both France and Austria, the actual priority of reporting upon it should be credited to Professor Cruchet and his colleagues. It would probably be correct to say also that if the malady now known as encephalitis lethargica was—to modify Professor Achard's metaphor—so baptised originally in Austria, it was born in France, where it has been subsequently studied with so much care and distinction.

DE MINIMIS.

"De minimis non curat lex," but medicine is much more condescending than the law, and its hard-working partner surgery is still less above paying attention to small miseries. "Misery" is hardly too strong a word to use in describing such troublesome conditions as ingrowing toenail, and in his British Medical Association Lecture, delivered before the Northern Counties of Scotland Branch, and published in this issue at page 383, Professor John Fraser of Edinburgh did well to discuss some of these troubles, and to tell the general practitioner how best to deal with them. People whose livelihood depends on their ability to walk and stand comfortably, equally with those whose pastimes are pedestrian, find their lives rendered troublesome, and even their morals debased, by affections of the feet. Indeed, we have known a patient driven to drink by bunions, and restored to sobriety and a subsequent blameless life by suitable operations on her first metatarsal bones. Let no one, therefore, scoff at Professor Fraser's choice of subject.

[1] *L'encéphalite épidémique.* Ses origines—Les 64 premières observations connues. Par René Cruchet. Paris: G. Doin. 1928. (5¼ × 8¼, pp. 134; 8 figures. 15 fr.)

[2] The Origin of Encephalitis Lethargica, *British Medical Journal*, 1928, ii, 315.

[3] *Brain*, 1919, xlii, 305.

The ten affections he deals with are all well known to orthopaedic surgeons; the conservative methods of treatment best suited to them are in general well established, and, when patients are sensible enough to carry them out perseveringly, successful. Unfortunately the surgeon often has to fight against fashion, a contest in which he is apt to come off second best. It may perhaps confirm the cynic in his pessimism to reflect on the sad backsliding which has occurred in the choice and fashion of shoes in the last hundred years. The working women of 1829 did not attempt to copy the evil habits of the idle rich of that day. To the lady of fashion of the early nineteenth century, who rode in her carriage and seldom walked, three-inch heels and pointed toes may have wrought little harm, and the workers were then content with low heels and wide toecaps, and pattens or clogs for wet weather. To-day, when many women dress in flimsy high-heeled shoes, as though they were not under the necessity of walking in all weathers to omnibus, tram, or train, the wonder is, not that some of them have foot troubles, but that so many seem to escape them.

Experts will probably differ in their estimates of the importance of flat-foot in the causation of some of the deformities described by Professor Fraser, but they will all agree that the extreme degrees of hallux valgus are generally found associated with arthritic cases of over-pronation. The syndrome denoted "march-foot" is an interesting one, and its etiology and pathology were quite obscure until *x* rays revealed the secret. Rare in this country, it was not uncommon in Germany, where, as *Fussgeschwulst*, it was well known as affecting soldiers after long marches in heavy order, or after they had been practised too assiduously in the "goose step" or parade march. At first the condition was attributed to malingering, but the presence of oedema invalidated that diagnosis. Finally, the fact that fracture was the cause of the trouble in the typical case was shown with the help of *x* rays by a French military surgeon. A controversy about which part of the metatarsus normally bears the most weight raged for a time in Prussia, but seems at last to have died of fatigue, leaving both sides unshaken.

Professor Fraser describes also Köhler's disease of the navicular bone, and refers to the Osgood-Schlatter disease and other manifestations of perverted development of small bones. The number of names of observers who have described what are often unimportant lesions or syndromes is very large indeed, and the pages of dictionaries of medical terms are overloaded with them. We are sometimes reminded of a suggestion of the late Sir Jonathan Hutchinson to call new maladies by the names of the patients in whom they were first observed. Then, as Sir Jonathan said, we should have "Mrs. Jones's leg" or "Robinson's instep," and no physician or surgeon would be tempted to seek notoriety, or perhaps immortality, from a pathological specimen or a morbid process.

SLUM PROPERTY AND ITS ABOLITION.

A good deal will be heard, in connexion with the approaching general election and after it, about the problem of the slums and the reconditioning of slum property. An admirable contribution to the practical consideration of the matter will be found in Mr. E. D. Simon's book entitled *How to Abolish the Slums*.[1] Mr. Simon is, of course, an acknowledged authority on the subject of housing, and all that he says about it may be relied upon as sane and practical, in contrast to so much that is written or spoken of a sentimental and rhetorical, or at best visionary, character. The survey offered in his present book is restricted. He does not touch upon the problem in rural areas at all. He just mentions, but does not deal with, the particular difficulties of London. He has no special regard to the circumstances and law of Scotland, beyond noting the fact that "the English worker is prepared to spend a substantially larger amount than the Scotch; he demands by tradition and custom a higher standard of housing, and is prepared to make more sacrifice to obtain it." His book, therefore, has to do almost entirely with urban communities in England and Wales outside London, and he illustrates his statements very largely by the experience of Manchester and, to a less extent, of Birmingham and other great cities. Even so, he will seem to some to have rated too high the permanence of good conditions in many post-war houses, and too low the deteriorating effect of the "slum mind" in many of the dwellers in houses which are themselves structurally decent. His own figures indicate that this may be a debasing factor of the order of from 12 to 25 per cent. in even good housing schemes. It may be held, too, that he goes unnecessarily far in demanding a separate house for each family, and does not envisage what have been called "high tenements" in their due proportion. It appears a little unreasonable that such homes, when called "flats," whether luxury or ordinary, should be more and more attractive to the well-to-do, whereas when somewhat wantonly dubbed "tenements" they should be considered improper for those who are poorer. Even the calculated stabilization of the population at about 48 millions in some twenty years from now, limiting and defining the problem as it undoubtedly does, scarcely justifies the proposition, one house, one family. Outstanding merits of Mr. Simon's book are his careful definition of terms and problems, his putting of "reconditioning" in its proper place and proportion with regard to new building, his establishment of a proper criterion of "overcrowding" as contrasted with the official standard adopted by the Registrar-General, the thoughtful, careful, and moderate statement of his case and the necessities of the situation, and his logical presentation of his general programme and suggestions with regard to rent restriction, rating readjustment, and a children's rent allowance. This book, together with that by Mr. B. S. Townroe, which was the subject of an annotation in the *Journal* of December 1st last (p. 998), should enable candidates for Parliament, and all those who are interested in public health administration and social problems, to obtain a grasp of a problem which is certain in the early future to force itself on their attention.

[1] *How to Abolish the Slums*. By E. D. Simon. London and New York: Longmans, Green and Co. 1929. (Demy 8vo, pp. xii + 146; illustrated. Paper cover, 2s. 6d. net; cloth, 4s. 6d. net.)

BERI-BERI COLUMBARUM ET HOMINUM.

In 1897 Eijkman first observed a polyneuritis of fowls and pigeons, and demonstrated its causal relationship to decorticated rice. His discovery laid the foundations of our knowledge regarding the etiology of at least one type of disease included in the generic term "beri-beri," and led eventually to recognition of the fact that deficiency of various accessory food factors or vitamins was the primary cause of a large group of pathological conditions in man and beast. Polyneuritis columbarum is a specific form of starvation resulting from the almost complete absence of vitamin B from the food, and it may be prevented by the addition of purified vitamin B hydrochloride in no greater quantity than 2 to 2.5 parts in 1 million parts of washed polished rice. Among other pathological changes in this disease there is atrophy of the heart, in contrast with the hypertrophy of the heart characteristic of beri-beri hominum. This difference was first established by McCarrison (1919); but now, as a result of further researches,[1] he has succeeded in reproducing in pigeons the

[1] *Beri-Beri Columbarum*. By Lieut.-Colonel R. McCarrison, C.I.E., M.D., I.C.S., etc. Indian Research Memoirs, No. 10. Calcutta: Thacker, Spink and Co. 1928. (Cr. 4to, pp. v + 146; 26 figures, 7 plates.)

human type of beri-beri with characteristic hypertrophy of the heart. He holds that the elements of the disease—namely, multiple neuritis, cardiac derangement, and oedema—are all equally important and characteristic, and though there is great variety in their degree and their combination, the presence of all three constitutes the complete clinical picture of true tropical (wet) beri-beri. Current conflict regarding the causation of beri-beri turns on whether the disease is due to the action of a toxin or toxins in rice, perhaps aided by a vitamin deficiency, or whether it is due solely to deficiency of the antineuritic vitamin. McCarrison, working with a number of pigeons sufficient to provide adequate statistical data, has demonstrated that a condition of beri-beri columbarum, with all the pathological characters of human beri-beri, can be produced in pigeons by means of diets similar to those used by human sufferers from the disease, and that it can be prevented by the same means as those which prevent beri-beri hominum. The basal factor in the production of beri-beri columbarum is insufficiency, but not complete lack, of the antineuritic fraction of vitamin B. There is an optimum insufficiency of vitamin B—provided by diets of which the vitamin B value is from 20 to 50 per cent. below the minimum required for the maintenance of normal metabolism—at which beri-beri columbarum is most likely to arise. The ultimate cause of the disease, McCarrison believes, may be traced not to the negative factor of vitamin deficiency, but to the operation of a toxic agent produced in the course of a disordered metabolism determined by too little vitamin B in the food. To the operation of this toxic agent may be attributed in whole or in part the clinical and pathological manifestations of beri-beri. McCarrison believes the beri-beri columbarum which was the subject of his investigation to be equivalent to the variety of beri-beri hominum endemic in parts of the Madras Presidency, and that his experimental results confirm the view that true tropical beri-beri is due, not to toxins produced in rice by bacterial action, but to vitamin B insufficiency. Such a conclusion does not preclude the possibility that other maladies resembling beri-beri, and even given its name, may have a different etiology. McCarrison believes that the chief reason for the prevalence of beri-beri among certain rice-eating races in India lies in the fundamental poverty of the vitamin B in the whole grain of the rice available for their consumption.

BESREDKA ON IMMUNIZATION.

THE current theory of antibacterial immunization postulates as an essential element in the process the production or presence of an antibody. A considerable inroad has, however, been made into the theory of late as a result of the researches of Professor Besredka, whose recent work on immunity[1] gives a very clear account of his views and of the stages by which they were arrived at. The current theory rests on Bordet's work on haemolysins, in which he showed that the introduction of alien red blood corpuscles into the circulation is followed by the production of antibodies. It has been assumed, somewhat arbitrarily as it would seem, that a like reaction follows the introduction of bacteria into the body; but, as Besredka points out, actively proliferating and toxin-producing bacteria differ greatly from blood corpuscles, and might be expected to give rise to a different reaction; the two resemble each other in having a protein basis towards which the organism doubtless reacts in either case by elaborating lysins and coagulants, but there the resemblance ends. Besredka asserts that the production of antibody is not essential, and he has been led to propound a new theory of antibacterial immunization as the result of his experiments, among which those on anthrax infection are perhaps the most striking. The difficulty experienced in immunizing the guinea-pig against anthrax is well known; the animal has been considered to be so extremely sensitive to the virus as to preclude the possibility of immunization, a single bacillus being sufficient to induce a rapidly fatal septicaemia. But Besredka has shown that, if the skin is left out of account, the guinea-pig exhibits a complete natural immunity to the virus; if care is taken to leave the skin intact, a hundred times the lethal dose may be injected into the brain, peritoneum, or other organ and no ill effects follow. Moreover, no appearance of antibodies follows the injection. Further, he has shown that the fatal result which ensues on the injection of the skin is not due to the resulting septicaemia, since the latter is a late, almost agonal phenomenon; death must be attributed to the prior intoxication from the skin lesion. It is clear then that, if it is permissible to generalize from this particular case, the tissues of the body are of two kinds in regard to their reaction to virulent bacteria: one kind is non-receptive and the bacteria behave towards it as saprophytes, the other is receptive and enables the bacteria to proliferate and produce their toxins. Moreover, the receptive cells are not disseminated through the body, but are located in definite organs (in the skin in the case of anthrax). Hence Besredka was led to the conception of local immunization, and he found that it was perfectly feasible to establish complete immunity against anthrax in the guinea-pig by making a large number of injections of vaccine into the skin of different parts of the body or by applying it as a compress over the whole surface of the abdomen. The immunization is local but the immunity is general, because the remaining tissues of the body, other than the skin, possess a natural immunity. Immunization so induced is not associated with the appearance of antibodies, and according to Besredka the mechanism of vaccine therapy has nothing to do with antibodies. During an infection the body furnishes of itself the maximum effort of defence that is possible to it. Vaccine therapy does not cure the diseased cells, it merely protects the healthy ones. In the course of disease already present the effect of vaccines is to saturate the affinity of the receptive cells for the virus and render them incapable of reacting with them. Vaccine therapy thus aims at the prophylaxis of the healthy receptive cells; its object is to circumscribe the focus of infection by rendering the healthy cells unsuitable as a medium for a new infection. As to the cells already infected, the microbes that have invaded them are dealt with by the phagocytes.

[1] *Études sur l'Immunité dans les Maladies Infectieuses.* Par A. Besredka. Paris: Masson et Cie. 1928. (Demy 8vo, pp. 414. 30 fr. sans majoration.)

"TOO TOO SOLID FLESH."

"I SEE no objection to stoutness, in moderation," remarked the buxom Fairy Queen in *Iolanthe*, but the usual fate of the fat affords a striking illustration of the futility of half-measures; it indicates the results of adopting a policy which is not founded on a clear comprehension of the underlying causes and on a recognition of the necessity for carefully planned action during the rest of the patient's life. Of half-measures in this field there are plenty. Educational campaigns may show that the expectation of life of the fat is much inferior to that of their lean brethren, and that the former's morbidity rate is relatively high, but such education is only of temporary value. Again, heavier members of both sexes may from time to time undergo "cures" at hydros and similar resorts suited to their fancies and purses, conceivably in the propitiatory spirit in which our mediaeval ancestors punctuated their lapses from virtue with penitential interludes. Until we give up regarding overweight as a mere incident, like a foreign body which has wandered into the eye, and begin to treat it as we would diabetes or any other deep-seated constitutional ailment with which we are familiar, our efforts are

bound to be as futile as they are irrational. This is reasoning which every senior medical student could bring forward, so close is it to the repetition of truisms; but it is quite another matter to produce carefully analysed records wherewith to drive home the argument. It is in this respect that a paper published by Dr. S. A. Holböll in *Ugeskrift for Laeger* for January 10th is of considerable value. He has investigated the subsequent careers of 100 patients treated for overweight between July 1st, 1926, and December 31st, 1927, in a hospital in Copenhagen. They were re-examined in 1928, from four months to a year and three-quarters after discharge. All the patients were women of the working classes, and most of them were admitted to hospital for complications of overweight; indeed, there were only four admitted to hospital for obesity alone. In the case of such complications as heart disease only those patients were included in this study whose cardiac symptoms were considered to be the effect rather than the cause of the overweight. It is interesting to note that by far the most common complication was osteo-arthritis deformans of the knees, found in 47 cases. Heart symptoms were present in 22 cases, flat-foot in 13, varicose veins in 15, lumbo-gluteal myalgia in 17, sciatica in 8, adiposalgia in 35, and neurasthenia in 19. More than half the number of patients were over 50 per cent. above the normal weight. The treatment employed was dietetic, and also included the administration in 85 cases of thyroidin, and in 71 cases the institution of hydrotherapy with massage. The action of the bowels was promoted in cases of constipation. The average duration of residence in hospital was about five weeks, and the average loss of weight was 20 lb. The immediate results on discharge were very satisfactory, and improvement was recorded in all the patients showing heart symptoms, in 57 of the 64 with complications affecting the lower limbs, and in 9 of the 12 cases of adiposalgia. Patients who had been admitted to hospital almost unable to move, puffing and sweating on the slightest exertion, were discharged as comparatively healthy and active human beings. Since they were still above the normal weight, they were urged to continue their dietetic regime at home. The connexion between their symptoms and their overweight was repeatedly explained to them, and they were advised to weigh themselves at regular intervals, and to obtain thyroidin from their doctors if their weight did not decline. In almost every case their doctors were notified of the results of the treatment in hospital, and were told that a further reduction of weight was desirable. In spite of all these precautions it was found that 93 of the 100 patients had gained weight, the average gain being 22 lb. In most cases the improvement achieved with regard to the complications was not maintained. Indeed, there were only 12 patients who were found on re-examination still to enjoy the improvements recorded on discharge, and many of these had only recently been discharged. Only 23 of the 100 patients had even attempted to diet themselves after discharge, and only 9 had subsequently taken thyroidin—a drug which their doctors were often unwilling to give them. Dr. Holböll's remedies for this very disappointing state of affairs include educating the patient and, in some cases, the doctor, both of whom must be taught that overweight is not merely an aesthetic blemish, but, in its advanced forms, and when complicated by circulatory disturbances, a very serious disease. His observation that only a few of his patients possessed their normal capacity for work is but another way of saying that overweight is one of the most costly complaints from which the community suffers. The picture he puts before his colleagues is vivid enough: middle-aged and elderly women of the working classes waddling into hospital under a miscellaneous burden of ailments, and sailing out again almost symptom-free, only to relapse in a few months' time. Only a few of these relapses were inevitable; the women who could not afford to diet themselves, and those who were too stupid to do so, constituted a very small minority. The kernel of Dr. Holböll's advice is to be found in the following sentence: "Efforts should be made to assure in some form or other an effective control of these patients after their discharge." Whether fat people are more self-indulgent than others is not for us to decide, but Falstaff evidently took it for granted that they are when he said to Prince Hal: "Thou seest I have more flesh than another man, and therefore more frailty."

HOSPITALS IN WESTERN AUSTRALIA.

FOR some years past the Public Health and Hospitals Department of Western Australia has undertaken increasing expenditure for medical services; whereas in 1925 the total expenditure was £172,066, in 1926 it was £185,624, and in 1927 it was £197,721. The increase has been due in part to steady extension of the hospitals, and in part to the fact that the operation of the entertainments tax has made more funds available. The system of hospital administration throughout the State is by no means uniform. The older hospitals, established in the days when the Government of the State assumed the responsibility for supplying hospital services, were placed under direct departmental administration, and the bulk of these have remained so administered till to-day. Twenty-seven hospitals are thus controlled by the department, in addition to the King Edward Memorial Hospital at Subiaco and the Wooroloo Sanatorium. The so-called public hospitals, of which there are three—namely, the Perth, the Children's, and the Fremantle—work on a different system from the rest; in them the professional work is mainly done by the honorary medical staffs, and only those persons who cannot reasonably be expected to pay for medical or surgical attention are admitted. Throughout the State, moreover, there are a number of hospitals administered by local committees, and to these and to the hospitals controlled by the department anybody may be admitted, the poor receiving medical services gratis, those of moderate means paying a small fee, and the well-to-do full fees to the doctor attending them. All types of cases are admitted to the same wards, and receive the same hospital services and care. Of recent years, while there has been increasing provision of hospitals in the newer settlements, many medium-sized institutions in the older towns have been neglected. Several of them, though perhaps adequate when they were built, are now hopelessly out of date; some are insanitary, and many are seriously short of accommodation. In general terms, the policy of the department is not to support the erection of hospitals within thirty-five to forty miles of existing hospitals; the aim is to provide settlers with reasonable hospital facilities, having in view the better roads that are and will be available, and the improvements in motor transport.

FORLANINI AND ARTIFICIAL PNEUMOTHORAX.

IN 1920 there was founded in Milan a society having for its object to honour the memory of Carlo Forlanini (1847–1918), and to promote the study of tuberculosis, and more especially tuberculosis of the lungs, in the treatment of which Forlanini did notable pioneer work. That society has now published a volume of Forlanini's collected works,[1] many of which were scattered through various journals, accessible only with difficulty at the present time. The book gives a connected account of Forlanini's researches. The first suggestion that abscesses and other lesions of the lungs might advantageously be treated by means of artificial pneumothorax appears to

[1] *Scritti di Carlo Forlanini.* Scelti e Pubblicati a Cura della "Foundazione Carlo Forlanini." Bologna: L. Cappelli. 1928. (Sup. roy. 8vo, pp. 1045; illustrated. L. 120.)

have been made by Dr. James Carson in a communication to the Medical Society of Liverpool in 1821. No attempt was made at the time to carry out the suggestion in practice, and it was not until the year 1882 that Forlanini proposed to substitute artificial pneumothorax for the surgical methods then on trial in the treatment of tubercle of the lungs—namely, pneumotomy and ablation. No opportunity of putting the method into practice occurred until 1890, when favourable results were obtained and reported to the International Congress held in Rome in 1894. An interesting account is given of Forlanini's first successful case—a girl of 17 in whom lung trouble had existed for two years; there were signs of a cavity in the upper part of the right lung and abundant bacilli in the sputum; the left lung was normal. The patient appears to have been completely restored to health. Forlanini was followed in 1898 by John B. Murphy, and later by Brauer and Saugmann, and the method is now practised largely throughout Europe and America. The volume is almost entirely concerned with the pathology of the lungs, and more than half of its contents deal with the subject of artificial pneumothorax and its application to tuberculous disease.

A "NATIONAL CAMPAIGN."

OUR attention has been drawn to a commercial organization registered as Oscilectron, Ltd., which heads its advertising circulars with the impressive title "National Campaign Against Rheumatism." In one of its leaflets, sent out on January 17th, 1929, this company invites sufferers from rheumatism in any form to visit with a friend "the Bristol headquarters of the National Campaign Against Rheumatism," and witness a demonstration of a machine called the "oscilectron," by which it claims to obtain "immediate results" in the treatment of "Rheumatism or one of its kindred complaints (Arthritis, Neuritis, Lumbago, Sciatica and Stiff Joints), also Flat-foot, Head Noises, and Catarrhal Deafness." It may be good business for a company, whose sole purpose seems to be the exploitation of a proprietary appliance, to adopt words that suggest some connexion with the National Campaign Against Rheumatic Diseases, of which Sir Thomas Horder is chairman. Needless to say, however, the two organizations have nothing whatever in common. The directors of Oscilectron, Ltd., are stated in the circular as: Sir T. Cato Worsfold, Bt., M.A., LL.D., S. Finklestone (British-Russian origin), and John Vielle (British). We know nothing of the other two directors, but it surprises us that a person of the standing of Sir Cato Worsfold should lend his name to such methods.

BILLROTH CENTENARY.

MEDICAL men and women in all parts of the world will honour next month the memory of the great Austrian surgeon Theodore Billroth, who was born in April, 1829. The Medical Faculty of the University of Vienna, the Vienna Academy of Science, and the Medical Society of Vienna have united to organize special centenary celebrations on April 9th and 10th in the city where Billroth practised and taught from 1867 until his death in 1894, and it is expected that the medical profession and scientific associations of many foreign countries will be represented. The idea of holding centenary celebrations originated in the small circle of those in Vienna who learnt under the pioneer of visceral surgery, but Billroth's disciples and admirers are to be found in the chairs of medicine and surgery of every country, and not only in Austria and Germany. Full particulars of the celebrations can be obtained from the Akademie der Wissenschaften in Wien (Universitaetsplatz 2, Vienna I).

SOUTH AFRICAN MEDICAL CONGRESS.

THE second Annual Meeting of the Medical Association of South Africa (British Medical Association), incorporating the twenty-third South African Medical Congress, is to be held at Port Elizabeth in the week beginning May 13th; it will be opened by His Honour A. J. P. Fourie, Administrator of the Cape Province. An official invitation to appoint delegates to the Congress has been sent to the Council of the British Medical Association, which will be glad to hear of any members who are likely to be in South Africa at the time of the Congress. Any such members are cordially invited to communicate with the Medical Secretary of the Association at the B.M.A. House, Tavistock Square, W.C.1.

INFLUENZA.

OUR conjecture that last week's total of deaths ascribed to influenza in the great towns of England and Wales would be of the order of 1,200 proved correct; the total rose from 967 to 1,241. It seems clear that in London and the north-west the maximum has now been reached, and probable that for the country as a whole the worst has been passed; the total number of notifications of pneumonia decreased from 3,898 to 3,658. There is, however, evidence in Yorkshire and the North that a further increase should be looked for, and probably also in the Midlands. The intense cold does not seem to have affected the incidence of mortality. Clinical reports still speak of the general mildness of the epidemic.

THE Council of the Royal Society, at its meeting on February 21st, recommended fifteen candidates for election into the Society. The new Fellows include Dr. John Mellanby, who holds the University Chair of Physiology at St. Thomas's Hospital, London; Dr. H. S. Raper, Brackenbury Professor of Physiology in the University of Manchester; and Dr. F. W. Twort, superintendent of the Brown Animal Institution (University of London).

THE spring course of demonstrations of specimens in the museum of the Royal College of Surgeons of England will commence on Monday, March 4th, when Mr. C. E. Shattock will demonstrate specimens illustrating diseases of the tongue and lips. On Friday, March 8th, Sir Arthur Keith will demonstrate the anatomy and pathology of diverticulitis. On March 11th and 18th Mr. Shattock will show specimens illustrating diseases of the kidneys and testis. On March 15th Sir Arthur Keith will discuss recent advances in our knowledge of the anatomy and physiology of the gall-bladder, and on March 22nd the nerve supply and movement of the colon. The demonstrations will be given in the theatre of the College in Lincoln's Inn Fields, W.C., at 5 p.m.; they are open to advanced students and medical practitioners.

THE KING.

OUR readers will have noted with pleasure the uniformly favourable tone of the announcements about the King which have appeared in the newspapers since His Majesty travelled to Craigweil House on February 9th. Although the weather has been almost as bleak on the south coast as in London, definite progress is reported, and a most encouraging sign is the increase in weight. Equally significant is the fact that His Majesty is now able to move about his room and to follow with interest the news of the day.

DERMATOLOGY AS A BRANCH OF GENERAL MEDICINE.

LETTSOMIAN LECTURE BY DR. H. W. BARBER.

THE first of three Lettsomian Lectures was delivered before the Medical Society of London on February 18th by Dr. H. W. BARBER, physician in charge of the skin department, Guy's Hospital. His general subject was "Dermatology in relation to other branches of medicine."

The Function of the Skin.

Dr. Barber began by remarking that he was satisfied that dermatology, which was once the Cinderella of medical specialties, had now come into its own; the mere reading of a modern textbook indicated how intricate a subject it had become. He hoped to show in these lectures that Erasmus Wilson was justified in saying that cutaneous medicine was a branch of general medicine of great significance and importance. The lecturer held that the study of the normal skin and the accessible mucous membranes, and the common changes that occurred in them as the result of faulty metabolism or invasion by infective organisms or toxic substances, should serve as the student's introduction to clinical medicine.

He proposed in this first lecture to consider, first, certain physiological functions of the skin which had played an important role in the progress of mankind from a primitive to a civilized state, and secondly, the morbid effects upon the skin and mucous membrane that the unnatural conditions under which the majority of civilized people were compelled to live might entail.

It was almost a truism to say that the skin was a buffer between the body as a whole and its environment. There were, however, certain points in its physiology which were insufficiently realized, and which were of profound importance in general medicine. The skin determined to a great extent the reaction of the organs of the body to external influences, such as heat, cold, and trauma. It was not too much to say that through the medium of the skin the evolution of civilized man had come about. The differentiation of the various species of animals and types of men was in some degree a question of climatic conditions. Presumably civilization dated from the time when a band of primitive men made their way northwards from the tropical zone, and on the approach of winter tried to obtain artificial warmth, first by means of underground shelters and the skins of animals, and later by discovering how to make fire.

Climate in Human Evolution.

Further development and differentiation of races, and their rise and fall, was dependent on several factors, of which climate was perhaps the most important. For work and health the best climate was one in which the mean temperature rarely fell below 38° F. or rose above 64°. Variability of temperature and weather conditions from day to day were factors of great importance. A mean temperature of 50–60° was the optimum for both physical and mental activity, which diminished rapidly when the temperature went above 65°. The localities in which such conditions favouring efficiency obtained were exactly those in which civilization had reached its maximum. Speaking on one of the most inclement nights of a severe winter, Dr. Barber still declared that the British climate was largely responsible for the position held by the Anglo-Saxon race to-day.

The temperate climate, with its frequent and moderate changes from warmth to cold, and vice versa, made for vigour of body and mind. On the other hand, the effect of the constant moist heat of the tropics and the paralysing influence of long periods of intense cold needed no demonstration. Although the invention of clothing and artificial methods of heat production had enabled man to flourish in climates which favoured his activity and progress, yet owing to the misuse of the very comforts and pleasures and labour-saving devices which his ingenuity had created, and the unnatural conditions under which a large proportion of the population lived, the effect upon man's purely animal functions had been disastrous. Dr. Barber instanced the slothful habit and gross appetite of some and the faulty diet and under-feeding of large numbers of others. Truly did a Frenchman say, "Man does not die; he kills himself." Man had created his own pathology.

Diseases of Civilization.

To anyone who surveyed the general trend of medical research and treatment during the last few years it must be obvious that there was a return to beginnings. The Egyptians, Greeks, and Romans were all cognisant of the beneficial action of sunlight and cool air on the skin, yet the value of these had only lately been rediscovered by the moderns. The very factors which enabled man to emerge from his tropical lassitude had for generations militated against his physical development. Clothing and fuel he had abused, covering his unfortunate skin, even in summer, with layer on layer of impermeable material, and he heated his houses, offices, and hotels so as to create an atmosphere more pernicious than that of the torrid zone from which he sprang. The dictates of fashion and the mistaken fear of "catching cold" had robbed the body of one of its great sources of health—namely, the exposure of the skin to light and air.

One could reasonably compare the diseases to which man living an active outdoor life under so-called primitive conditions was subject with those of animals in their wild state, and the diseases of man in so-called civilized existence with those of animals in captivity. The latter included disorders of metabolism and function which were probably unknown to primitive people and which did not occur among wild animals. Some of these appeared to have arisen within the memory of our own generation, so kaleidoscopic were the changes of disease. The more virulent infections had been succeeded by a variety of subacute or chronic conditions due to organisms which were formerly non-pathogenic and normal inhabitants of the human mucous membrane. The skin and the mucous membranes of the mouth, nasopharynx, and intestine had a natural saprophytic flora of their own; in addition to the invasion of foreign organisms leading to the production of specific diseases, their own saprophytes might, under certain conditions, become pathogenic, give rise to local conditions, and by infecting the blood stream cause morbid effects in distant organs or tissues.

The Seborrhoeic State.

The lecturer spoke of three organisms which might almost be considered normal inhabitants of the skin or mucous membrane in civilized man—namely, pityrosporon, the acne bacillus, and *Staphylococcus albus*. A predisposition to the growth of these three organisms was afforded by that morbid state of the skin usually termed seborrhœa, by which was meant an excessive or altered secretion of the sebaceous glands. He did not mean that these organisms occurred only in seborrhoeic skin, but seborrhœa was by far the commonest condition of such growth. Of all diatheses the seborrhoeic one was probably the commonest. It exemplified how a metabolic change resulting from unnatural conditions of life might produce an environment which enabled ordinarily harmless saprophytes to become parasites and produce skin diseases. The skin was not alone involved in the seborrhoeic state; the mucous membrane suffered and became likewise the prey of these particular saprophytes.

After showing photomicrographs and other illustrations of the action of the three organisms mentioned, the lecturer discussed the cutaneous manifestations of the seborrhoeic state, the thickened, gross, dirty skin, the imperfectly formed horny layers, the greasy scalp with adherent dandruff, and the dank and lifeless hair, also changes in the mucous membrane and some other manifestations, including chronic nasopharyngeal catarrh with frequent exacerbations. The seborrhoeic state being an index of faulty metabolism, it was evident that diet was a factor of paramount importance. It was easy to understand how the normal sebaceous secretion might be altered by excessive intake of fat or fat-forming foods. The best treatment, apart from dietary restrictions, was a vigorous outdoor life in a sunny climate. He believed the seborrhoeic state to be worthy of closer study than it had received. It was the basis from which conditions of far greater importance than its cutaneous manifestations arose.

Belgium.

[FROM AN OCCASIONAL CORRESPONDENT.]

A Health Insurance Scheme.

FOLLOWING on her ratification of the International Convention which was drawn up by the International Labour Office at Geneva in 1927, Belgium is now required to introduce a compulsory health insurance bill. Up to the present the practice in this country has been the subsidizing of voluntary effort—that is to say, Government grants are made to private mutual insurance societies. Now that a scheme of compulsory insurance has been rendered necessary by her acceptance of the decisions taken at Geneva in 1927, a commission has been appointed in Belgium to draft legislation for insurance against sickness and disablement.

The proposal thus elaborated may be said to have as its fundamental principle that each insured person shall become eligible for full treatment, comprising the various specialties as well as ordinary medical and surgical benefits. Every workman between the ages of 14 and 65 who receives less than 12,000 francs a year is compulsorily insured. The administration of sickness insurance is entrusted to the recognized insurance societies, the insured person retaining free choice of which society he shall join out of those approved by the Government. Insurance in respect of invalidity is effected on the same lines by federal bodies analogous to the British approved societies, which will similarly receive State approval. All these agencies will have to submit to general control and accept responsibility for providing their members with all the benefits made available by the general insurance legislation. They will be supervised by a higher council of sickness and invalidity insurance, which is to be composed of twenty-seven members appointed by Royal decree as follows: (1) seven nominated by the Government, two representing more particularly the commercial and industrial interests; (2) two actuaries; (3) three medical practitioners and three pharmacists nominated by the recognized national associations of doctors and chemists; (4) twelve delegates from the industrial insurance societies which accept the proposed law, and from the central invalidity board, membership being allocated among these bodies in proportion to the number of their members who are compulsorily insured and come within the scope of the law.

Four essential points advanced by the Belgian medical profession are: (1) there must be an absolutely free choice of doctor, specialist, and residential institution, a minimum charge being fixed in respect of payments to medical staffs as well as for maintenance; (2) arrangements for paying medical staffs shall be left to medical practitioners, who will discuss the principles involved through the agency of their own delegates to a higher committee of insurance institutions or provincial subcommittees; according to the neighbourhood, payment will be made either by contract or on an attendance basis; (3) professional secrecy must be safeguarded absolutely in the interests of the patient as well as of the doctor, but information may be given by the treating doctor to the supervising doctors; (4) the necessary control shall be entrusted to medical practitioners chosen by insurance societies in consultation with professional associations, and any disagreements be dealt with by committees on which each has equal representation.

The main feature of the Belgian scheme is that the worker is insured by his local society, and that one-quarter of the cost of his insurance is paid by him. These two factors favour financial control and enable the insured person to appreciate the value of his own contribution. In fact, since he pays his quota personally to his own society or local union, and its subsequent disposition is not hidden from him, he will be the first to object to misapplication of the funds.

Sequels of Encephalitis Lethargica.

During recent years there have been many cases of encephalitis lethargica, and the serious sequels of this infection have formed the subject of numerous investigations. Dr. Oliviers has contributed to the Belgian Society of Mental Medicine the results of his study of the mental deterioration thus brought about, and his conclusions deserve to be noted. He finds that the mental disturbances of encephalitis lethargica are more common after childhood than is generally realized, affecting some 75 per cent. of adult patients, and occurring most frequently in those predisposed by their heredity or by inherent faults of character. They appear at a considerable interval after the termination of the obvious convalescence period, and possibly after a lapse of three or four years. The mental change is nearly always associated with neurological signs, just as neurological sequels are rarely present without mental impairment. There is, however, no definite relation to be made out between the nature of either of these morbid conditions. All the varieties of mental abnormality may be met with, including depression, the lesser forms of mania, the hebephrenic-catatonic syndrome, and bradyphrenia. The different types are very seldom clearly defined, and the symptoms are remarkably variable. These mental disturbances are to be attributed to the persistence of the encephalitic virus, and the prognosis is grave. With rare exceptions the retention of these patients in a residential institution is necessary under close supervision; rigid precautions have to be taken, including the provision of special accommodation, in view of the perversity, subtlety, and unpleasant behaviour of the victims of this disease.

Prevention of Motor Accidents.

The Royal Academy of Medicine is taking up the serious problem of what can be done to deal with motor drivers who have physical disabilities, but at the moment no solution has been found. Professor Weekers suggests the following line of approach. A list should be prepared of those physical defects which are incompatible with safe motor driving. In some way or other, in conformity with our existing legislation, arrangements would be made to notify accordingly all who apply for driving licences that motor driving by any person afflicted with one of these conditions would constitute a serious offence. If, in spite of this, he continued to drive at his own risk, and an accident happened, he would automatically become liable to a heavy fine and a term of imprisonment. Under such conditions, it may be presumed, insurance companies would need no further stimulation to insist on a medical examination of those applying for accident insurance, in the same way as they do in the case of life insurance. The companies would appoint for this work medical practitioners, who would have access to specialists and would be enabled to keep under observation any candidates whose condition gave rise to doubt. In this way there would be a guarantee that persons unfit to drive were prevented from doing so.

Campaign Against Quackery.

The Belgian Medical Federation has convened a joint committee of representatives of medical practitioners, dentists, and chemists, with a view to seeing if any common action is desirable as regards charlatanism generally. This committee will be empowered to submit proposals for any alteration in the existing laws relating to the practice of the healing art which its joint wisdom indicates as being necessary. It will look out for opportunities of facilitating the growth of a system of medical jurisprudence, and will call the attention of members of the medical profession to the ways in which charlatanism can be suppressed. This committee has already undertaken a strong campaign against those varieties of quackery which inflict injury upon the general population and tend to the public discredit of the medical practitioner.

Scotland.

Voluntary Hospitals in Scotland.

AT a meeting of the Scottish Regional Committee of the British Hospitals Association, held in Glasgow on February 20th, the position of the voluntary hospitals as affected by the proposals of the Local Government (Scotland) Bill was discussed. Colonel John A. Roxburgh, chairman of the governors of the Western Infirmary, Glasgow, presided. He recalled that at the last meeting of the committee in December, 1927, it was agreed to set up local committees in the five regions into which Scotland was divided, in

order to consider the possibility of co-operation between statutory authorities and the voluntary hospitals, and also to approach the Secretary of State for Scotland in regard to his views on the subject of co-operation between hospital authorities. The Secretary of State had appointed a liaison committee for the purpose of keeping his department in touch with voluntary hospital opinion, and assisting the voluntary hospitals in regard to regional difficulties. Colonel D. J. Mackintosh, medical superintendent of the Western Infirmary, Glasgow, who is a member of the liaison committee, stated that this committee consisted of the representatives of voluntary hospitals in different areas, and the committee had been actively engaged in drafting proposals with reference to the Local Government (Scotland) Bill. Under this bill the Poor Law hospitals would be transferred to the town and county councils. A proposed amendment to the bill had been put forward by the Corporation of Glasgow to empower local authorities to remove hospital services entirely from the Poor Law, and to provide hospital treatment for all kinds of sickness, which was exactly the position in England and Wales. The liaison committee, representing voluntary hospitals, could not recognize discrimination in quality of hospital treatment between paupers and non-paupers, and it considered that the only way to avoid this was to remove hospital treatment entirely from the Poor Law by conferring on the Scottish authorities the same general power as would be possessed by the English authorities. It could not contemplate the growth of a general hospital service which would prevent complete co-operation with the voluntary hospitals. The removal of the hospital services from the Poor Law would, however, have to be done under conditions that would provide full safeguards for the voluntary hospitals. Consequently, as the result of meetings between the liaison committee and the Department of Health, a new clause had been drafted with a view to removing the Poor Law stigma from hospital services, and the Scottish voluntary hospitals would secure provisions that substantially safeguarded their future place in the scheme of hospital services. The voluntary hospitals would require to be active and far-seeing, and much would depend upon their machinery, local and central, for ensuring co-operation among themselves and with the public authorities. The department's view was that much of what was proposed could be achieved by administrative action without the necessity for legislation. The position was worthy of the most careful study by the Scottish Regional Committee of the Hospitals Association, and the liaison committee could be effective only if it had behind it an informed body of opinion. The chairman said that the area committees were to make their opinions known to the Department of Health through the members of the liaison committee representing them, and it had to be decided what was the best way of keeping those members of the liaison committee informed of the opinions of their particular areas. He thought that the Regional Committee of the British Hospitals Association was the best body in Scotland to concentrate the opinions of the hospitals, and many questions were bound to arise regarding which the considered opinions of the hospitals in Scotland would be very valuable. In the course of discussion it was pointed out that it would be desirable to have the views of the areas co-ordinated before they went forward to the liaison committee, for it would be unfortunate if different views were put forward from various areas on any particular subject. In order to avoid this, it was suggested that periodic meetings of the Regional Committee should be held to consider the reports of the area committees. It was generally agreed that the proposed amendments to the bill were satisfactory.

Crichton Royal Institution, Dumfries.

The eighty-ninth annual report of the Crichton Royal Institution, Dumfries, for the year 1928 has just been issued. Dr. C. C. Easterbrook, physician-superintendent of the institution, in his report states that the number of patients on the register at the end of the year was 1,043, including 484 men and 559 women. During the year there had been 344 admissions, 216 discharges, and 75 deaths, and the total number of cases under treatment during the year had been 1,334, with an average daily number of 1019. Of the 1,043 patients, 746 were certified, while the voluntary patients at the end of the year numbered 297. The number of voluntary cases under treatment during the year was 459, the highest number hitherto recorded. The number of private patients, certified and voluntary, at the end of the year was 694. With regard to the forms of mental disorder, the chief were, as usual, the constitutional psychoses, such as melancholia (97 cases), confusion (36), dementia (30), paraphrenia (30), mania (28), dipsomania (11), and epileptic psychosis, neurasthenia, hypochondria, hysteria, and choreic psychosis in smaller numbers. There were also 15 cases of congenital psychoses and 10 cases of organic psychoses, including general paralysis 5, encephalitis lethargica 2, cerebral apoplexy 2, and progressive muscular atrophy 1. Of the 216 discharged, 146 were voluntary patients and 70 were certified. Among the voluntary cases the recovery rate was 25.5 per cent. of the number admitted, and among the certified cases 23.5 per cent. The forms of mental disorder from which recovery took place were chiefly melancholia, confusion, mania, and delusion, and the total duration of the illness in recovered cases was less than half a year in 36 per cent., up to two years in 39 per cent., and over two years in 25 per cent. Of the 75 patients who died, 59 were certified and 16 were voluntary cases, the death rate being 7.3 per cent. of the average daily number. The chief causes of death were cardiac disease and arterio-sclerosis in 27 per cent., pulmonary tuberculosis in 13 per cent., pneumonia in 11 per cent., exhaustion in 9 per cent., apoplexy and senility each in 8 per cent., and general paralysis in 6 per cent. The mean age at death was 60 years. A hospice or new reception hospital and infirmary was occupied towards the end of the year. An arts and crafts pavilion had been erected early in the year, and was opened in May, with the object of improving the previous arrangements for occupational therapy. In this department classes of two hours' duration are held for patients who are interested in handicrafts.

Victoria Infirmary, Glasgow.

The forty-first annual meeting of the Court of Contributors of the Victoria Infirmary, Glasgow, was held in the Merchants' House on February 15th. Lord Provost Sir David Mason presided, and said that the governors of the Infirmary had shown great enterprise and wisdom in adding recently a new wing. This additional accommodation had been justified by the fact that the 6,580 patients treated during 1928 showed an increase of 1,161 as compared with those of the previous year. The desire shown by some of the patients to contribute in return for benefits received was indicated by the fact that £1,220 had been given by patients during 1928. It had been necessary to draw a sum of £22,464 from capital account in order to meet the extension schemes, and the revenue had been insufficient to meet the cost of maintenance to the extent of £8,835. He was pleased to observe that contributions from employees, which had amounted to £11,454, showed an increase of nearly £400 over those of the previous year. He thought that an appeal for funds should be made in outside districts served by the institution, in view of the fact that 1,671 of the patients had come from outside the city. Mr. William Gray, chairman of the governors, in seconding the report, mentioned that over £60,000 had been received by the three large infirmaries of the city in the past year from employees in public works. This was obtained under a system by which one penny in the pound was deducted from the wages as a contribution to hospitals, and he thought that this scheme could be advantageously extended to warehouses, offices, and shops. If the citizens could generally see their way to contribute one penny for each pound of income, it would not be necessary to make the urgent appeals which emanated every year from the hospitals. The question was raised as to whether the hospitals could secure repayment in connexion with road accidents, because in such cases less than one-tenth of the amount expended by the voluntary hospitals on such patients was returned to them. The chairman replied that an Act of Parliament would be required to deal with the situation, and it would be impossible to get one through during the life of the present Parliament. Action on this matter was being taken, however, both by the hospitals in Glasgow and by the British Hospitals Association.

Aberdeen Royal Infirmary.

The annual meeting of the Aberdeen Royal Infirmary contributors was held on February 13th, with Sheriff Dallas in the chair, when the 189th annual report was submitted. The total number of patients admitted in the past year had been 31,115, an increase of 2,647 over those admitted in 1927. The year closed with a surplus of £1,600, including £365 derived from work done by patients in the handicraft school of the institution. The chairman remarked that renewed interest was being taken in radium, of which for a number of years past the Infirmary had had a loan of a quantity from the Medical Research Council. The directors had been considering the establishment of a volunteer blood transfusion service, and he hoped that a good response would be made to their appeal for volunteers.

Maternity Home at Stirling.

A maternity home for Stirling district, which adjoins and forms part of the new Royal Infirmary of Stirling, recently opened at Livilands, was formally opened on February 15th by Mr. W. G. Gardiner, vice-president of the Infirmary. The home has accommodation for 20 beds, and is situated immediately to the west of the Infirmary. It includes an operating theatre and a large summer-house for mothers in the convalescent stage. Provision has also been made for carrying out ante-natal clinics in connexion with the hospital. The maternity home has been jointly provided by Stirling Town Council, Stirling County Council, and the directors of the Infirmary.

England and Wales.

Health Conditions in the Welsh Coalfields.

On *a priori* grounds it might be assumed that the depression in the coal-mining industry would be correlated with a deterioration in the physical and mental condition of the mining population; indeed, the view is widely prevalent that such deterioration is actually taking place. Some confirmation of the general impression is provided in a report* of a first-hand investigation conducted by Sir Arthur Lowry and Dr. James Pearse, both of the Ministry of Health, into the conditions of the inhabitants of the coal-mining districts of South Wales and Monmouthshire, though here and there in their report are patches of an unaccountable brightness. For example, the general death rates in the regions under survey showed no variations indicating the prevalence of conditions specially injurious to health. Furthermore, there has been no unusual mortality from epidemic diseases. On the other hand, in the administrative counties of Glamorgan, Monmouth, and Merthyr county boroughs the infantile mortality rate for 1927 is higher than for 1926, and the rates each year since 1920 compare unfavourably in their general tendency with those for the whole of the country. Thus, the rate in England and Wales in 1920 was 80, and in 1926 and 1927 it was 70. In Glamorgan, the rates for the same years were respectively 90, 76, and 86; in Monmouth they were 88, 66, and 87; in Merthyr county borough they were 83, 84, and 105. Complete figures for 1928 are not yet available, but in each of the counties the rates for the first nine months of 1928 are lower than for the corresponding period in 1927. It is interesting to note that no obvious growth in the prevalence of tuberculosis, a disease to which resistance is decreased by insufficient or improper feeding, has impressed itself on the district medical officers of health or on those responsible for tuberculosis administration. The death rates from pulmonary tuberculosis in 1927 are somewhat higher than in 1926 (in Glamorgan, Monmouth, and Merthyr county boroughs the rates for 1926 and 1927 respectively are 777 and 856, 572 and 611, and 682 and 703, the figures representing death rates per million of population). The figures for non-pulmonary tuberculosis, on the other hand, show a marked decline as compared with those of the earlier years. The only deficiency disease which appears to have increased is rickets. As this disease till recently has not been common in South Wales and Monmouth its occurrence as a fresh development is rightly regarded as significant of deficiency in the quality, if not the quantity, of the diet of the child population. No indication was found of obvious and widespread deterioration of physique in the population as a whole, except that in some areas women, especially the mothers of young children, suffered to an unusual extent from languor and anaemia. There is also some evidence of loss of tone and persistence of debility after illness in the older men, and men long unemployed who have not been actually ill find difficulty in the mere physical effort of resuming work. The diet in the households of unemployed men was found to comprise little beyond white bread, butter or margarine, potatoes, sugar, jam, tea, and bacon in limited quantities. Meat was seldom eaten except in very small amounts on Sunday; fresh milk was not seen except when supplied from a welfare clinic; fresh vegetables, other than potatoes, were rare. Though such diet, according to accepted canons, is unsuitable for the maintenance of health over any prolonged period, especially the health of young children and nursing mothers, the investigators have to record that they discovered no widespread manifestation of impaired health which could be attributed to insufficiency of nourishment. Apart from diet another factor which must tend to impair physical condition is insufficiency of proper clothing and footwear. In the houses visited the investigators frequently found the bedclothing and underclothing far from adequate, and the boots not enough for the school children, to say nothing of the adults and infants. These, then, were the material and physical facts of the situation observed by Sir Arthur Lowry and Dr. Pearse. They make some reference, however, to certain of its less tangible features which may, in the long run, be even more significant for evil than the hardship caused by deficiency in the necessaries of life. Above all, they record the demoralization, the depression, and the listlessness produced by long-continued idleness. A large number of the unemployed have not worked in a mine since 1921, while many men have been idle since May, 1926. Work, it appears, is needed rather than food or clothing. "The present position," it is suggested, "arises from the fact that there are many more miners in the area than can ever find work in the mines or in other industries in the locality." It is to the promotion of the transference of the surplus miners as rapidly as possible to work elsewhere that any additional funds for the relief of miners and their families can best be allocated.

* Report on Investigation in the Coalfield of South Wales and Monmouth. (Cmd. 3272.) Presented by the Minister of Health to Parliament, February, 1929. Published by H.M. Stationery Office. Price 3d. net.

Noise and Health.

A Chadwick public lecture was delivered in the University Hall, Gordon Square, W.C., on February 21st, by Dr. Dan McKenzie, who took as his subject "Noise and the public health." Sir William Collins was in the chair. Dr. McKenzie said that modern civilization was attended by various serious drawbacks, among them being ugliness, which was presented to both the eye and ear. Ugliness to the ear was noise; there were other points of view, not necessarily the same as the physicist's, from which noise may be regarded. Any sound that disturbed repose was noise, which startled and exhausted the human nervous system. The great increase of industrial noises in workshops and factories was acknowledged to have a bad effect on those who worked in them; efforts had been made to reduce the hurtful sounds and the exhaustion they produced. Domestic noise was another affliction of modern life largely produced by street and highway traffic, and little had been done to minimize it. The lecturer proceeded to describe the actual effects of industrial and domestic noises on public health, and discussed the question "Has the increase of noise any influence in the increase of mental disorders?" He lamented the dying down of Government interest in the trouble. Cessation of activity had been attributed to difficulty in concocting a definition of noise. A definition was needed, no doubt, to prevent undue interference with industry. Fifty years ago an English Government had contrived to legislate against insanitary dwellings without any definition to speak of, the only description being that

local authorities were empowered to condemn any premises in "such a state" as to be a nuisance or injurious to health; subsequent juridical rulings had shown that it was only necessary for public health purposes to prove interference with "personal comfort." This was what noise did, after all. The lecturer suggested: (1) That "zones of silence" during hours of silence should be demarcated by police or public health authorities. (2) That the streets in front of schools, colleges, hospitals, and nursing homes should be paved with rubber blocks. (3) That the size, weight, and speed of motor lorries should be reduced. (4) That heavy goods should be relegated entirely to the railways for transit. Dr. McKenzie concluded by reading a letter from a patient in a hospital complaining bitterly of the noises, not outside, but inside the hospital; he added that after inquiry he had found the complaints to be true for all hospitals. They were much too noisy, and recovery of the sick within their wards was interfered with by neglect of a primary rule of treatment. He appealed to all hospital authorities to go into this matter with their nursing staffs. They would be astonished and humiliated by the result of their inquiries. Reform was needed in the matter of subjection of invalids to noise, and reform, like charity, should begin at home. Gramophone records were used to illustrate various types of objectionable mechanical sounds and human cries. It is announced that the next Chadwick public lecture will be delivered on March 11th at 8 p.m. in the Lecture Hall of the Royal Society of Arts, John Street, Adelphi, when Mr. Mowlem Burt will show and explain a cinema film of Imperial Chemical House, and will describe the making of a modern building. Future lectures will deal with engineering as applied to health and civilization, and health in West Africa. Further particulars may be obtained from the secretary at the offices of the Chadwick Trust, 204, Abbey House, Westminster, S.W.1.

Courses in Psychiatry at the Maudsley Hospital.

The second part of the twelfth course of lectures and practical demonstrations for the diploma in psychological medicine will be held at the Maudsley Hospital, Denmark Hill, S.E.5, on various afternoons during March, April, and May. Six lectures on the practical aspects of mental deficiency will be given on Tuesdays, at 2.30 p.m., by Dr. F. C. Shrubsall, commencing on March 5th and omitting April 2nd. A series of eight lectures on morbid psychology, by Dr. Edward Mapother, will begin on March 6th, and be continued on the following Wednesdays. Dr. A. A. W. Petrie will deliver three lectures on therapeutics, on Tuesdays, commencing March 26th and omitting April 2nd. Of twelve clinical demonstrations in neurology Dr. F. M. R. Walshe will give six, on Thursdays from March 7th and omitting March 28th, at the National Hospital for Paralysis, Queen Square; Dr. F. Golla will give the remainder on Thursdays, at the Hospital for Paralysis and Epilepsy, Maida Vale, the first being on April 25th. Eight lectures on the psychoneuroses will be delivered on Mondays by Dr. Bernard Hart from April 29th, omitting May 20th. Six lectures on crime and insanity will be given by Dr. W. Norwood East on Tuesdays, from April 23rd, and six demonstrations in clinical psychiatry by Dr. Mapother on Wednesdays, from April 24th. The pathology of mental diseases will be dealt with in four lectures by Dr. F. Golla, followed by four demonstrations in pathology of the central nervous system, by Dr. Charles Geary; these will take place on Fridays, the first being on May 10th. Four lectures on the legal relationships of insanity, and treatment, will be delivered by Dr. C. Hubert Bond on Fridays, from May 10th, and Mr. Fraser Moore will lecture twice on the abnormalities of the fundus oculi—namely, on Mondays, April 15th and 22nd. Two demonstrations in laboratory methods will be given by Mr. S. A. Mann on Tuesdays, May 7th and 14th; these will include the examination of the blood and cerebro-spinal fluid. The fee for the combined course is ten guineas, and inquiries should be addressed to the director of the Central Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E.5. In addition to the special lectures and demonstrations mentioned there are a limited number of appointments as clinical assistants available at the hospital. Service in this capacity, whether whole-time or part-time, is recognized by the various examining bodies as constituting the clinical experience required by the regulations for the diploma. Inquiries in this respect should be made to the medical superintendent of the hospital.

Sun-ray Treatment at Torquay.

Professor Leonard Hill, on February 20th, opened a "sun-lounge" at Torquay, which has been established by the municipal authorities. The new lounge is ninety-five feet long and faces due south, with a view of Tor Bay; the walls and roof are made of vita-glass. Professor Hill emphasized the importance of infants and children receiving as much sunshine and open air as possible, and commented sternly on the folly of allowing such a high content of dust to exist in most houses, as was shown to be the case when sunbeams illuminated the particles. He recalled the value of ultra-violet light in destroying ordinary bacteria, and reminded his audience that these rays could be collected from the sunshine, as well as from the sun. The necessity for paying attention to ventilation in addition to light was another point stressed by him.

Ireland.

National Health Insurance.

A REPORT on the administration of national health insurance covering the period from April 1st, 1921, to March 31st, 1928, has been issued by the Minister for Local Government and Public Health. The figure of 701,882, representing the total number of insured persons at December 31st, 1922, was made up of 386,251 persons resident in the Saorstat Eireann, 310,094 persons resident in Northern Ireland, and 5,537 persons resident in Great Britain who were "stray" members of societies or branches approved only for operation in Ireland. In the Free State in 1924 there were 435,753 insured men and women; in 1925, 466,339; in 1926, 481,785; and in 1927, 492,594. The figures show a gradual increase in the membership of societies, most likely due to the fact that the number of new entrants and of re-entrants has not been offset by the number of members who have ceased to contribute, and who, but for the operation of the Prolongation of Insurance Act, would have been automatically excised from the membership registers. Since 1923 there has been a steady increase in the amounts paid in benefit. Examination disclosed cases of excessive expenditure. The figures for sickness, disablement, and maternity benefits, taken together for each year, are as follows: 1923, £406,704; 1924, £444,274; 1925, £458,318; 1926, £530,914; 1927, £628,498. Although this increase is partly accounted for by the increase in cash benefits paid by some societies, it is feared that at least some portion of it is attributable to payments made to persons who are not genuinely incapacitated. The amounts issued to societies during the years 1921 to 1927 to pay the costs of benefits and defray the expenses of administration in respect of their members were: 1921, £930,380 (all Ireland); 1922, £593,282 (all Ireland to February 28th, 1922, Free State only for remainder of year); 1923, £479,949 (Free State); 1924, £499,720 (Free State); 1925, £521,117 (Free State); 1926, £605,577 (Free State); 1927, £712,968 (Free State). The comparatively large increases in the years 1926 and 1927 are no doubt partly due to the additional benefits which, as the result of the valuation of approved societies at December 31st, 1923, became available from July, 1926. It is thought that the prolonged period of unemployment, with its consequent effect on the vitality of insured persons, has also contributed to the increase.

Measles in County Fermanagh.

At a recent meeting of the Fermanagh Regional Education Committee, Dr. W. A. Dickson, school medical officer for the county, said he thought the members of that committee and of the subcommittees could help him by circulating a little common-sense knowledge among the people. When an epidemic of measles started many parents were of opinion that if their children caught the infection they would really be better off than if they escaped this disease

altogether when they were young. The fact was that people were not supposed to get disease at any age, and a child who never had measles was better physically than a child who had. People living in the country knew that when there was an infectious disease in the house it was their duty to warn the proper authorities and to isolate the patient, but as a rule neither of these precautions was taken. Milk should not be sent to the creamery from a house in which there was infection, but from lack of ordinary precautionary measures infectious diseases spread rapidly. There were at present 600 or 700 cases of measles in the county, and he thought the number was increasing.

Immunization Against Diphtheria.

In a report to the Dundalk Health Board on the diphtheria immunization scheme which has been in force in Dundalk for some months, Dr. Musgrave stated that 750 children had been immunized. He referred to a great deal of loose talk which was calculated to undermine the confidence of the people in the effectiveness of the work, and stated that there was now no doubt as to the worth of the protection afforded to nine children out of ten; parents or guardians who were wise would not withhold this nine to one chance. The committee decided to start another campaign in August, and to provide free medical treatment for the children of poor parents.

Correspondence.

ENLARGEMENT OF THE PROSTATE.

SIR,—The addresses on enlarged prostate by Mr. Nitch and Mr. Grey Turner, and the criticisms on these now appearing in the *Journal*, have raised several points of great importance to surgeons dealing with this class of case, and I should like to add some remarks on the results of my own experience.

Mr. Turner emphasizes a dictum laid down by Sir Henry Thompson to the effect that enlargement of the prostate of such a degree as to give rise to symptoms demanding treatment does not occur before the age of 50, and quotes his own experience of over thirty years in support of it. May I venture to question the truth of this dictum.

In March, 1915, I saw a man, aged 45, who had had prostatic symptoms for at least a year. He had frequency of micturition, difficulty in starting the act, and diminution of the stream; there were two and a half ounces of residual urine. The muscular wall of the bladder was hypertrophied. A trilobed intravesical prostatic growth weighing three drachms was enucleated with complete relief of his symptoms. In February, 1926, I saw a patient, aged 47, with haematuria and dysuria of two years' duration. I removed an adenomatous prostate, weighing two and a half ounces, which shelled out easily. In January, 1925, in a man aged 47, I removed a portion of the prostate which projected upwards from the floor of the urethra close to its internal opening. The polypoid projection was half an inch long and about one-eighth of an inch thick; on section it showed adenomatous tissue with papillary growth into intracystic spaces. When seen a year and a half later the patient was quite well. In May, 1926, I saw a man, aged 45, with carcinoma of the prostate; an unsuccessful attempt was made elsewhere to remove it. The patient died within a year with large masses of growth in his pelvis. Some years ago I saw a patient, aged 47, die from uraemia, the result of prolonged and neglected back pressure from an enlarged prostate. These cases demonstrate that it is unsafe to exclude enlargement of the prostate in a case of urinary symptoms in a man under 50 years of age.

I agree with Mr. Turner that the patient may present himself suffering from symptoms suggestive of gastric trouble. Some months ago I saw a patient with supposed carcinoma of the stomach in which *x* rays showed an hour-glass contraction. On examination I found a greatly distended bladder. Treatment was of no avail, and at his death I obtained permission to examine the stomach and the kidneys. The stomach was perfectly normal, but the ureters were dilated and the kidneys in a state of hydronephrosis from back pressure.

Mr. Nitch has evidently not had much experience of the indwelling catheter when he says that its use "is practically restricted to cases with slight renal deficiency or chronic urinary retention, for it cannot be employed when the bladder or kidneys are infected or when the prostate is bleeding." For cases in which clots are liable to block the lumen the catheter is, of course, useless, but my experience is that practically the only other contra-indication to its use is the discomfort it produces in quite a small proportion of patients. I look upon the indwelling catheter as one of the most life-saving measures at the disposal of the urologist, and every patient under my care is treated by this method of decompression until carefully conducted blood and urinary tests show that it is reasonably safe to operate. During this time the bladder is irrigated daily. I have seen many patients brought back apparently from the brink of the grave by this simple procedure, which any practitioner can carry out.

A man, aged 64, with twelve ounces of residual urine, when admitted to a nursing home for operation looked ill and anaemic, refused food, had a foul tongue, and suffered from nausea. His pulse was irregular and intermittent. A catheter was tied in, but he could not tolerate it, and regular catheterization with irrigation was substituted. His blood urea at this stage was 146 mg. per 100 c.cm. He continued to go downhill and at the end of a few days I urged him to make another attempt to retain the catheter. He consented, and the effect was nothing short of magical. In the short space of a week his tongue cleared, his appetite improved, and his pulse became steady and regular. On the eighth day his blood urea was found to have fallen from 146 to 40 mg. per 100 c.cm. Meanwhile the specific gravity of the urine began to rise and the quantity to diminish. He passed successfully through a prostatectomy and is living and well more than a year later.

In another patient, a man aged 70, with no other treatment than the tied-in catheter and irrigation, the blood urea fell in twelve days from 102 to 47 mg. per 100 c.cm. and prostatectomy was successfully undertaken.

A man, aged 62, was admitted to a nursing home with fifteen ounces of residual urine and a blood urea figure of 353 mg. per 100 c.cm. A thick deposit of pus, settling like bismuth to the bottom of the vessel, was present in his urine. He had hiccup and a tendency to vomit in the morning. A catheter was tied in. The blood urea fell from 353 to 240 in one week and his condition began to improve. In two months, during which time he was treated by the indwelling catheter and daily irrigation, the blood urea fell to 72. This was the best that could be done, and I then suggested suprapubic drainage. He preferred the catheter, and is going about to-day, six months after I first saw him, with an indwelling catheter, to which he has attached a stopcock, and looks the picture of health. Whether he will ever be fit for operation is a question, but he exemplifies the beneficial effects of the indwelling catheter. The catheter was taken out for a few days to try the effect, but the patient's temperature went up and uraemic symptoms developed at once; these ceased entirely on replacing the catheter.

I have in my wards at present a man, aged 58, who was admitted with uraemic symptoms and a septic bladder, the result of enlarged prostate. His blood urea was 253 mg. per 100 c.cm. With the indwelling catheter and irrigation his blood urea fell in the first week to 124 and in the second to 68. He is still under treatment, and I have hopes that he may yet be fit to undergo prostatectomy. I do not deny the benefits resulting from suprapubic drainage, but I am satisfied that in a large proportion of cases it can be replaced by the simple procedure of tying in a catheter.

As to operative technique, there is no question in my mind that Thomson-Walker's operation is an ideal one, and I have often performed it. I am, however, satisfied that a less elaborate procedure will produce good results. The operation takes longer than the old operation of Freyer, and personally I have not had a sufficient improvement in my results to warrant me in performing it as a routine. I am quite willing to admit that this may be due to my faulty technique, but I do think it is a severe measure, at any rate for the class of case I frequently meet with. My policy is to get the patient back to bed as quickly as possible, and I have not had undue trouble with haemorrhage or subsequent obstruction. On three or four occasions, it is true, I have had to deal with a diaphragm which formed between the prostatic cavity and the bladder, but this can be prevented at the time of operating by clamping the posterior lip of the septum and dividing it, a detail which takes about a minute to perform. I always use gloves, and after a trial of enucleation without placing the finger in the rectum, I have gone back to the older procedure because it steadies the prostate and renders the operation easier. Like Mr. Ralphs I use

two gloves on the left hand, one of which is removed at the proper time, and I really cannot see how, with ordinary care, any increased risk of sepsis can result from a finger in the rectum. I cannot endorse Mr. Irwin's objection to the gloved finger in the bladder. I dare say that I have many times failed to unearth minute "prostatic relics," but I wonder if they are so important as his letter seems to suggest.

After any operation for removal of the prostate, however conducted, there must remain the cavity vacated by the prostate with a raw surface bathed with septic material. The risk of absorption from such a surface must remain till it is at least covered by healthy granulations. To reach this cavity and drain it I have suggested and carried out a simple operation, the details of which will shortly appear. A tube introduced from the perineum through the ischio-rectal fossa, and passed through the sheath of the prostate, gives easy access to this cavity, and may render its drainage and cleansing less difficult to accomplish.

In making these few remarks I disclaim any intention of decrying any procedure that has for its object the reduction of the risks of the operation of prostatectomy or the morbidity following it. In all humility I may claim to have had a long and varied experience of different methods, and, having outlined my own views, I am ready and willing to lend a sympathetic ear to any suggestion that may improve my results.—I am, etc.,

Belfast, Feb. 18th. ANDREW FULLERTON.

VACCINATION IN THE LIGHT OF RECENT EXPERIENCE.

SIR,—In view of the suggestion in Dr. Goodall's letter in the *British Medical Journal* of February 16th (p. 319) that "alastrim" may not prove to be so stable a variant of small-pox as some of the speakers at the recent meeting of the Section of Epidemiology of the Royal Society of Medicine supposed, it may be of interest to record the fact that of the various outbreaks of this disease which I have had occasion to investigate officially, the earliest—that which I saw at Cambridge in 1903—was, as Dr. Goodall notes, of a much more severe type than is met with at the present time. Thus, of the 154 recorded cases at Cambridge no fewer than 15 died—a case mortality of 9.76; whereas nowadays deaths from "alastrim" are but rarely met with. Yet in many respects this outbreak differed markedly from the "textbook" types of small-pox, especially as regards the nature, method of appearance, and distribution of the rash.

Personally, as stated in my "Report on the relationship of small-pox and alastrim,"[1] I still think that "in special circumstances, various stages of varicloid disease may originate between that type to which the name of alastrim (or, in South Africa, amaas) has been given, and that which, in this country, is ordinarily regarded as typical small-pox." But definite relationship of these variants to small-pox is demonstrated by the protection afforded by previous vaccination, although the extent of such protection appears to differ somewhat according to the particular variant of small-pox under observation.—I am, etc.,

London, N.W.3, Feb. 16th. S. MONCKTON COPEMAN.

SIR,—Dr. E. W. Goodall's letter in the *Journal* of February 16th (p. 319) illustrates the confusion which results from the present method of presenting small-pox statistics. Under the name small-pox are included two forms of disease—namely, (*a*) variola major, with a case mortality which varies, but is often high and may reach 50 per cent. or more; (*b*) the fixed variant of small-pox known as alastrim (synonyms—mild small-pox, para-small-pox, amaas), the case mortality of which never varies; it is always *nil*. That is to say, the number of persons who die in the course of the disease is about the same per 1,000 cases as the number of deaths per month per 1,000 of the population from which they are segregated.

It is obvious that in any country in which these two forms of disease prevail, whether in the same or in different localities during any year, the case mortality for all cases of "small-pox" for that year will depend on (*a*) the case mortality of the major small-pox prevalent, and (*b*) the relative numbers of cases of major small-pox and its fixed variant alastrim. It is also clear that the figure arrived at by this method may be anything from *nil* to 50 per cent. or more. If the present method of collecting and presenting the small-pox statistics of this country had been specially devised with the malicious intention of causing the confusion now generally prevalent in regard to types and mortalities of small-pox, it could not have been more completely successful.

Dr. Goodall suggests that "it would be a crucial test for those who believe 'alastrim' to be quite a different disease from small-pox, to place cases of each disease together in the same ward of a hospital to observe whether patients suffering from the one became infected by the other." Since vaccinia protects against small-pox for a number of years, and against alastrim for a greater number of years on an average, and since small-pox protects against vaccinia for a number of years and alastrim protects against vaccinia for a number of *months*, it is reasonable to suppose that small-pox and alastrim would confer immunity each against the other, small-pox possibly for a longer period against alastrim than alastrim against small-pox. If this is so, Dr. Goodall's "crucial" experiment would give a negative result, but that would not affect the position of alastrim as a fixed or stable variant of small-pox. If the same experiment were carried out with patients suffering from small-pox and vaccinia the result would certainly be negative, but it would be a very serious matter indeed for those who, like myself, are advocates of vaccination, if this result meant that vaccinia is not fixed or stable.—I am, etc.,

Town Hall, Hornsey, N., Feb. 16th. R. P. GARROW.

ORAL ADMINISTRATION OF PITUITARY GLAND.

SIR,—For some time there has been discussion as to the efficacy of whole gland pituitary given by the mouth, it being generally held that during the process of digestion the active substances of the gland are rendered inert, and therefore the administration per os is quite useless. However, during the last five years I have been able to watch a number of cases treated by the oral administration of pituitary whole gland, and feel quite convinced that pituitary does act by this method. I append a few brief details.

Case 1.—Woman, aged 40, who suffered from adiposis dolorosa. She was so weak that she could hardly walk into the consulting room at hospital. Amenorrhoea had been present for nearly five years and also marked depression. Pituitary whole gland was given to her morning and evening. She took in all five grains daily. In a short time her strength came back, she was able to perform all her ordinary duties without feeling tired or being in any way fatigued, and menstruation was normally re-established.

Case 2.—Girl, aged 9 years, who had suffered from chronic constipation of many years' duration. The bowels were opened about once in eight days. She looked very ill, and was depressed. X-ray examination showed an atonic descending colon and sigmoid. All medicines failed and she was given pituitary whole gland, one grain thrice daily for nine months. The bowels moved at first once every two or three days, but after two months' treatment almost every day. She developed much more vigour, looked well, and lost her depression. After nine months the pituitary was discontinued and the bowels have remained practically normal since, and only occasionally she takes pituitary for a day or two at a time. At present she is in splendid health.

Case 3.—A boy, aged 4 years, who suffered from chronic constipation of a similar nature to the above, was treated in the same manner, and Dr. Robertson, who looked after him, told me that the result had been quite successful, the bowels now opening normally, nearly every day.

Case 4.—Girl, aged 12 years, suffering from pituitary adiposity, was given a quarter of a grain of thyroid twice daily, and two grains of pituitary thrice daily, at the Royal Waterloo Hospital. In just over a month she lost nearly a stone in weight and felt well in every way. We noticed, however, the tendency of the systolic blood pressure to mount upwards when larger doses of pituitary whole gland were given, and we ultimately reduced her dose to three grains daily. The greatest amount taken in twenty-four hours was nine grains. The action on the blood pressure was very useful in treatment of the next case.

Case 5.—A physician, who had always suffered from low blood pressure, the systolic being generally in the neighbourhood of 100 to 106 mm., and rarely above 110 mm., felt distinct general

[1] Appendix to the Report of the Chief Medical Officer to the Ministry of Health, 1919-20.

weakness when the pressure fell below 100 mm., and at 90 mm., with a pulse pressure of 20 mm., he felt weak and giddy, experienced some difficulty in breathing, and could hardly stand. He was given pituitary whole gland, two grains night and morning, but this proved too much, as it caused a feeling of fullness and throbbing in the head. The amount was therefore reduced to one grain night and morning, and later on to one grain daily. While he is taking pituitary the blood pressure keeps between 110 and 122 mm. systolic with a diastolic of 78 mm. He has found, however, that if he takes it for a few days the pressure will hold up at about 108 mm. for some months without any more pituitary. Recently he suffered from influenza, his blood pressure being so affected as to be just perceptible and no more, at the radial artery. The pulse rate fell to 58. He felt so weak that he could hardly raise his head. He took one grain of pituitary whole gland and within two hours his pulse rate was 72, the artery was full and almost bounding, and he felt fit to walk.

Reviewing the above cases leaves me convinced that pituitary whole gland does act by the mouth. Not very large doses are required. Further, in certain people in whom the pituitary gland apparently needs stimulation from time to time, re-activation would appear to occur from the rest given to it by pituitary administration for a short period. In one case in which it was tried the posterior pituitary body was evidently the agent of importance. In two of the above cases Dr. Mackenzie Wallis kindly did the glucose tolerance test, which showed pituitary deficiency in both.

I bring this matter before the readers of the *Journal* believing that it will be of interest to many, and it is my intention later on, in collaboration with another, to give detailed information of the effect of orally administered pituitary whole gland on a case of low blood pressure.—I am, etc.,

London, W.1, Feb. 12th. BERNARD MYERS.

TREATMENT OF ACTINOMYCOSIS.

SIR,—The article by Dr. Hubert Chitty in the *British Medical Journal* for February 23rd (p. 347) on the treatment of actinomycosis by tincture of iodine administered in milk leads me to state briefly that during the last twenty years I have used the proprietary article called tiodine in five cases of actinomycosis, with rapid and complete success.

It is probable that iodine in any form is of great value in clearing up the lesions of this disease, but my experience, and that of many of my medical friends and colleagues, leads me to believe that the compound mentioned acts more rapidly and more effectively than ordinary iodides. Tiodine is stated by Martindale to be a chemical combination of thiosinamin and ethyl iodide, and is administered either hypodermically or in the form of pills. My attention was first called to its value some twenty years ago by the late Sir Charles Ball, who related to me the details of a case in which potassium iodide had failed to produce any effect, and in which injections of tiodine had been followed by rapid improvement. I have always employed tiodine hypodermically, and have recommended it to others in this form. In addition to my own series of five cases, I have had reports on various occasions from old students testifying to its efficacy.—I am, etc.,

T. GILLMAN MOORHEAD, M.D., F.R.C.P.I.

Dublin, Feb. 23rd.

PROGNOSIS IN ECLAMPSIA AND ALBUMINURIA OF PREGNANCY.

SIR,—Dr. Arthur Crook, in his valuable letter (February 16th, p. 320), raises some difficult points which must be cleared up before we can even begin to understand the nature of the problem we are studying. Criticizing a statement in my paper (January 19th, p. 91) he asks, "What positive evidence as yet is there available to us that kidneys were previously healthy" in the case of the initial attack of eclampsia or albuminuria in a woman with recurring toxaemia? The evidence is twofold: (1) there is ample *post-mortem* evidence in eclampsia and not inconsiderable evidence of the same kind in albuminuria that the kidney lesion is typically entirely recent and that there has been no pre-existing disease—that is, that the nephritis is secondary to the toxaemia; (2) within a few weeks of the termination of the pregnancy in a woman who recovers there is often no manifestation even to the most delicate test of any renal lesion or deficiency. In the face of such evidence dare we assume that pre-existing kidney disease has anything to do with the cause of eclampsia, etc? And why should the relationship between toxaemia and kidney be different in any subsequent attack? It would, indeed, be a strange phenomenon if in one pregnancy eclampsia or pre-eclampsia should cause nephritis whilst in the next pregnancy nephritis should cause eclampsia or pre-eclampsia! Can this mean anything save that in searching for the cause of the 50 per cent. risk of recurrence in these conditions we must address ourselves to something more fundamental than a defect in the kidney?

In the second paragraph of his letter Dr. Crook seems to urge in favour of his views the "extreme difficulty in deciding whether an albuminuria of pregnancy is a 'simple toxic' or a 'nephritic' one." The difficulty, of course, arises from the fact that, owing to a confusion of the issues, we have in the past been attempting to distinguish between things which are identical. Most of the so-called "nephritic" cases, as I showed in my paper, have really been cases of eclampsia or pre-eclampsia recurring in successive pregnancies, which are common, and not cases of primary nephritis complicating pregnancy but arising independently of pregnancy—for example, from scarlet fever—which are rare. So rare are such cases that, although we have been carefully looking for them, we have seen only two in several years. During that time we have seen many obvious cases of recurrent toxaemia. We are anxious to get records of primary nephritis in pregnancy, and I take this opportunity of saying that we would be grateful if any of your readers would kindly send to me at the Edinburgh Royal Maternity Hospital notes of any such cases under their care, stating (1) the evidence showing that the nephritis had arisen independently of a pregnancy, and (2) its effect on the pregnancies and foetus, if any.—I am, etc.,

Edinburgh, Feb. 23rd. JAMES YOUNG.

TREATMENT OF EMPYEMA.

SIR,—With regard to the treatment of empyema there is a very simple and very effective method of ensuring the expansion of the lung after operation which is not so much recognized as it ought to be, and the hopelessness of the last sentence in Dr. W. Thomas's letter on February 16th (p. 322) prompts me to draw attention to it.

The method is as follows. The patient closes the lower false cords, and by their valve-like action prevents the escape of air up the trachea. He then makes an expiratory effort, and with the outlet through the treachea closed and no counter-pressure on the one side possible (owing to the opening in the chest wall), all the force of this expiratory effort will be spent upon the collapsed lung, which will be blown up just like a football bladder.

If there is much collapse or consolidation, care must be taken not to use too much force, for fear of overstretching the more healthy parts of the lung; frequent gentle efforts are therefore desirable.

When, as not infrequently happens, the patient has no voluntary power of closing the lower false cords, it is sometimes very difficult to teach him. In such a case one can often do so by drawing his attention to the fact that the closure of this valve is an essential part of the act of straining during defaecation.—I am, etc.,

Birmingham, Feb. 18th. T. STACEY WILSON.

VITAMIN D AND THE CALCIFICATION OF BONE IN TUBERCULOSIS.

SIR,—In 1925 certain patients with bone or joint tuberculosis were given milk irradiated by ultra-violet rays, and the results then obtained appeared to justify further investigation in this direction.[1] The facts given below seem to show that this method of treatment is not as valuable as it was hoped to be.

Half a pint of milk previously exposed to ultra-violet radiations was given daily to 17 patients whose bones were partially decalcified by tuberculosis. In 7 of these patients

[1] Pattison: The Effect on Tuberculosis of Bones and Joints of Food Exposed to Ultra-violet Radiations, *British Journal of Radiology*, February, 1926.

recalcification seemed to take place more rapidly than usual; in 10 patients no such improvement was noticed.

Encouraged by the results obtained by other workers on bone calcification, irradiated ergosterol (radiostol) was given to another series of patients, an average daily dose of 2 c.cm. being used. Twenty-four children with tuberculosis of bone or joint were given irradiated ergosterol during an average period of thirty weeks. The skiagrams of 14 of these patients showed no improvement in calcification, nor could the slight clinical improvement of their local lesion be ascribed to the radiostol. In 10 cases marked improvement in calcification was noticed, but only in 5 was it more rapid than usual. As, however, these 5 patients had previously been taking cod-liver oil for several months without any change in the bone calcification, it is possible that the irradiated ergosterol is responsible for the benefit obtained.

The value of any therapeutic agent cannot be gauged adequately by the clinical examination of a series of patients, even aided by skiagrams, as except in rare instances it is impossible to obtain satisfactory controls. But it is reasonable to suppose that the administration of vitamin D will prove beneficial to patients with poorly calcified bones, and when we are able, by more exact methods, to decide the optimum dose and to select our patients more carefully, we may hope to benefit a larger number of cases.—I am, etc.,

C. LEE PATTISON, M.B.,
King Edward VII Hospital, Sheffield.

February 14th.

INOPERABLE CARCINOMA OF THE BREAST TREATED WITH RADIUM.

SIR,—In the *British Medical Journal* of February 16th (p. 319), Mr. Geoffrey Keynes refers to my article on the above subject which appeared in your issue of February 9th (p. 242).

The chief object of dividing the cases treated into "primary inoperable" and "recurrent" was to show that between 1918 and 1928 three out of every four patients presenting themselves for treatment at the Radium Institute were in the "recurrent" category. The results of treatment as regards prolongation of life show little difference in the two categories. I only considered the results of 510 cases treated from 1918 to 1925, as the remaining 123 have lived for periods of less than three years.

Primary Inoperable.—Of 125 cases (1918–25), 26 were alive at the end of three years = 20.8 per cent. Of 98 cases (1918–23), 11 were alive at the end of five years = 11.2 per cent. Of 16 cases (1918), 2 were alive at the end of ten years = 12.5 per cent.

Recurrent.—Of 385 cases (1918–25), 86 were alive at the end of three years = 22.4 per cent. Of 307 cases (1918–23), 40 were alive at the end of five years = 13 per cent. Of 66 cases (1918), 3 were alive at the end of ten years = 4.5 per cent.

I will now outline the treatment these patients received. As a routine, external applicators were applied in such fashion as to procure a "cross-fire" radiation of the breast and a general radiation of the associated lymphatic areas. A usual dose was 7,500 milligram hours; 250 mg. of radium element, screened through 2 mm. of lead, and contained in numerous applicators, were applied at an approximate distance of 1 cm. from the skin surface for six hours a day for five successive days. A second treatment was given in about six weeks, and frequently a third treatment at a further interval of two months. In many cases the treatment of a primary growth, of an ulcerated area, or of a localized recurrence was supplemented by the burying of radium needles. The needles were of high content, each containing 5, 10, or 25 mg. of radium element screened with platinum 0.3 to 0.5 mm., or 1 mm. of silver. These were left in place for periods varying from ten to thirty hours; the number of needles depended on the size of the growth.

I purposely confined my article to a review of cases treated at the Radium Institute, and followed this by some general considerations on the treatment of carcinoma of the breast. I felt sure that the details of the treatment would be of little value as these patients were treated between 1918 and 1925, since when radium therapy has made considerable progress. Since 1911 nearly 1,500 cases of inoperable breast cancer have been treated at the Radium Institute, and it is interesting to note that there is still one patient alive who was first treated in that year. She was a recurrent case who had had three operations previous to treatment.—I am, etc.,

ROY WARD,
Assistant Medical Superintendent.

The Radium Institute, London, Feb. 22nd.

ASTHMA.

SIR,—I am much indebted to Mr. Frank Coke (*Journal*, February 9th) for referring me to his highly interesting work on asthma. I find him most appreciative of the nasal element in that disease (or symptom) as studied in the light of Dixon, Brodie, and Ransom's experiments. He uses the expression (p. 242) employed by myself in my article in the *Practitioner* in June, 1913, to the effect that a small polypus may, by intermittent contact, "tickle" (p. 11) the sensitive areas of the mucous membrane. I am therefore all the more surprised at the omission of nasal treatment in the list of methods of dealing with spasmodic asthma.

Dr. Francis, in his letter in the *Journal* of February 23rd (p. 372), recalls the discussion which took place so long ago as in 1899 in the Laryngological Society of London. He cites the views of Sir Felix Semon and Sir StClair Thomson as unfavourable to the practice of intranasal surgical treatment. My late respected friend Sir Felix Semon, in his speech at the meeting, stated that:

"cases had been noted by good observers, such as Voltolini, Bernhard Fraenkel, and others, in which the mere removal of nasal polypi, not undertaken with any view to cure co-existing asthma, had been followed by that result, *i.e.*, the asthma attacks—which had formerly been very troublesome, either entirely disappeared, or became less intense after the removal of the polypi—returned or became intensified with the recurrence of the polypi, and improved again after renewed removal. This was a very clear proof that asthma may be positively produced from the nose, and it was clearly a grave fault to altogether deny such a possibility. Nor were nasal polypi, although in the speaker's experience by far the most obvious, the only cause of nasal asthma; other forms of nasal obstruction could produce this effect, such as great tumefaction of the nasal mucous membrane, considerable deviation or excrescences from the septum, etc. In no class of cases, however, was the connexion more clearly established than in cases of nasal polypi. In the speaker's experience, relief might be given by nasal treatment in such cases—occasionally even when the asthma had been in existence for a long time, although the number of cases of the last-named category in which he had obtained satisfactory results was extremely small."

Sir StClair Thomson's reported statement in the old discussion should be read in connexion with his views as set forth in his classical textbook. In this he says (third edition, p. 209):

"The relationship between the nose and attacks of bronchial asthma is emphasized by laboratory as well as clinical experience. By the application of weak electrical currents to the nasal mucous membrane Lazarus was able to register a distinct increase in the intrabronchial pressure. Brodie and Dixon have produced spasm of the muscular walls of the smaller bronchioles by stimuli applied to the nasal septum.

"Every asthmatic patient should have his nose examined and, if necessary, treated. If polypi are present, or if there is polypoid degeneration of the ethmoid, these diseased conditions can be cleared away with good prospect of considerable, or even complete and lasting, relief in a large proportion of cases, particularly in those where the disease did not begin in childhood. Removal of adenoids should always be advised, as their presence increases the discomfort during an attack, and cure has, in some cases, followed operation. Turbinal hypertrophies should only be treated according to the usual indications, as their association with asthma is uncertain. Deviations and spurs can be left alone, unless their removal is required for other reasons."

A careful perusal of the reports of the discussion in the *Proceedings of the Laryngological Society* (vol. vi, pp. 88, etc.) will, I think, result in a modification of the impression "that the general opinion as regards the prospect of obtaining permanent relief by nasal operations was anything but hopeful."

For my own experiences I would refer to my papers in the *Practitioner* (June, 1913, and December, 1927).—I am, etc.,

JAMES DUNDAS-GRANT.

London, Feb. 26th.

CEREBRAL ANGIOSPASM.

SIR,—Dr. Gubb, in your issue dated February 9th (p. 247), and Dr. Allen, February 16th (p. 323), have both described cases of transient palsies of cerebral origin in patients over 70 under the heading of cerebral angiospasm. I feel that this diagnosis should not be allowed to stand without a query.

In the retina, obstruction of the central artery is met with most frequently in elderly patients; microscopical examination has proved that in them it is due to endarteritis with thrombosis. Here it is not uncommon to get a history of previous transient attacks of misty vision or blindness, and the general teaching in ophthalmology is to the effect that these attacks are due to a transient lowering of blood pressure in the diseased vessel, which hinders still further the trickle to the periphery and causes the temporary ischaemia.

In the cases described by Dr. Gubb and Dr. Allen possible causes for a reduction of cerebral blood pressure would appear to have been present; in the former "he was gathering figs with the head thrown back at an acute angle," in the latter "the patient rose in the morning feeling somewhat ill."

It is now generally accepted that though in arteriosclerosis with hyperpiesia the pressure is high in the arteries, it has been damped down and is below the normal in the arterioles. It would seem that an ischaemia would be more likely to result from a further diminution of pressure than from spasm of a diseased vessel wall.

A small number of cases of retinal ischaemia have been recorded in which the diagnosis of arterial spasm would seem to be justified (see *British Journal of Ophthalmology*, 1927, pp. 625–628). Temporary amaurosis from retinal spasm is mentioned in Osler's *Medicine* as having been recorded in a subject of Raynaud's disease.—I am, etc.,

London, W.1, Feb. 22nd. FRANK JULER.

PUBLIC ELEMENTARY EDUCATION.

SIR,—I am aware that when a book is sent by a publisher to a journal for review the author must be content to stand the racket of adverse criticism. However, I venture to think that your notice of my book *Mass Education in England*, in the *Journal* of February 16th (p. 311), under the title as above, misrepresents its contents. What you say might have been written "by special request" of somebody who is hit, and the book, I know, is a rude assault upon official authority, scholastic interest, and public prejudice.

Your method was to prejudice my case by complaint of the wording of a trade advertisement of the publishers, Messrs. E. J. Burrow and Co. You afterwards talk of my want of logic, but where is yours? The accuracy of Messrs. Burrow's description was, however, well borne out by an article upon the book by Mr. Horace Newte in the *Daily Mirror* of yesterday, and about a score of other journals have seen fit to handle the book with great respect and some with evident appreciation, without troubling about its advertisement. I suppose the proverb here applies as to honour in one's own country.

In vindication of myself and my book perhaps you will kindly allow me to state that the two chief points of my theme are not as you have represented them. I will restate them. They are: (1) That the effect of the compulsory entry of the greater part of the populace into those simple mechanical employments which are required to supply the daily wants of the community, as well as the daily bread of the workers, is preventive of the application and maintenance of the ordinary subjects of school learning, and of later mental culture, even where the ability of acquisition exists. (2) That the education of children to a degree beyond that which corresponds to their varying native intelligence and inherent powers of becoming educated is an impossibility. As to argument in proof of these statements, so far as No. 1 is concerned it is capable of practical test, but it can hardly be necessary to suggest to doctors that they need to make inquiries into the effect of school education and the existence of mental culture as to-day exhibited among the dwellers in working-class streets. No. 2 should be self-evident, but, if not, proof of it will be found in the statistical results of official inquiries and reports which find a careful detailed quotation in my book—one of the several facts connected with the book that you omitted to mention.—I am, etc.,

Cheltenham, Feb. 21st. J. H. GARRETT, M.D.

*** When, in connexion with a book sent for review, it is claimed by publisher or author that it contains "startling information and deductions," or that it is "a rude assault upon official authority, scholastic interest, and public prejudice," it is surely permissible to examine how far such claims are justified, and to point out, if such is the reviewer's honest opinion, that the book does not fulfil what is claimed for it. In his letter Dr. Garrett restates his two chief points. In our notice we described them in words quoted from the book itself, and they do not seem to differ essentially from the points as he now puts them.

BRITISH JOURNAL OF UROLOGY.

SIR,—It has long been a source of wonder to foreign observers that there should exist no British journal devoted to urology, which has become a universally recognized specialty, and is being taken up by an increasing number of young men in England to-day; whereas for a long time past journals of urology have appeared in America, France, Germany, Italy, and Spain. Since 1911 there has been an active British section taking part at the congresses of the International Society of Urology. Again, and when the time was ripe, the council of the Royal Society of Medicine thought fit to establish the subject of urology as a separate section, and not as a subsection of surgery, thereby showing that they held that urology was entitled to be separated off as a special subject for study.

We realize fully the generous help given hitherto by your *Journal* in publishing a number of important articles on urology as practised in Great Britain; nevertheless, we feel that there is nowadays such abundance of special work being done that can only find a voice if it can be given the additional outlet of a journal specially devoted to the subject. Such a journal is bound also to enhance the prestige of British urology. We feel sure, therefore, that our publication will in no way be hindering, but on the contrary will be supplementing, your efforts to forward the reputation of British Medicine.

A large editorial committee has been formed representing urologists in all the British-speaking countries of the world, and they intend, under our combined editorship, to bring out quarterly a *British Journal of Urology*, which will circulate not only in this country but in America and abroad.—We are, etc.,

FRANK KIDD,
H. P. WINSBURY WHITE,
London, Feb. 19th. Editors.

BANISTERIN.

SIR,—In the *Evening Standard* for February 21st there appeared a paragraph which stated, on the authority of an International News Service message, that Professors Lewin and Schuster had described to the Berlin Medical Society a new drug called "banisterin," which was considered to be "a cure against paralysis caused by organic brain diseases." A similar paragraph suggesting the use of "banisterin" in the treatment of encephalitis lethargica went the round of the Australian press in 1928.

Professor Lewin has described "banisterin" in two papers (*Archiv für experimentelle Pathologie und Pharmakologie*, April, 1928, vol. 129, p. 133, and *Comptes rendus de l'Académie des Sciences*, February, 1928, vol. 186, p. 469), and the composition and chemical characters of the alkaloid are so like those of harmine, discovered by Fritsch in 1847, as to leave little doubt in the minds of chemists that "banisterin" is harmine. Professor Lewin remarks that this has been suggested to him, but he follows his brief description of the pharmacological action of "banisterin," in the second paper mentioned above, with the remark, "To my knowledge harmine does not produce

similar effects." In the *Archiv* paper he states he is relying on published information regarding the action of harmine.

Harmine is available in England, if not in Germany, and it seems to be essential that a pharmacological comparison of "banisterin" and harmine should be instituted as soon as possible. The point is important because if Professor Lewin's results are confirmed a demand may arise for this drug, and harmine can probably be made much more easily from the usual source, the seeds of *Peganum harmala*, than from the plant utilized by Professor Lewin, *Banisteria caapi*. The latter is one of the suggested sources of the "yage" used by South American Indians as a narcotic. "Yage" has been repeatedly examined, and the two most recent papers on the subject (Elger, *Helvetica Chimica Acta*, 1928, vol. 11, p. 162, and O. Wolfes and K. Rumpf, *Archiv der Pharmazie*, 1928, vol. 266, p. 188) leave no doubt that the alkaloid it contains is harmine, though it was at first mistaken for a new alkaloid and called "yageine" by Villalba. Moreover, Wolfes and Rumpf state that Professor Lewin obtained his alkaloid from the same plant material as they did. The remarkable properties ascribed to "yage" are reflected in the name "telepathine," which Bayon gave to an alkaloid he obtained from "yage," and which is probably also harmine.—We are, etc.,

London, E.C.1, Feb. 25th. BURROUGHS WELLCOME AND CO.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

IN the House of Lords, on February 26th, the second reading of the Local Government Bill was moved by the LORD CHANCELLOR. Lord PARMOOR moved the rejection of the bill, and the debate was adjourned.

The committee stage of the Local Government (Scotland) Bill was completed in the House of Commons on February 25th.

On February 20th Colonel GRETTON presented a Hospitals (Relief from Rating) Bill "to grant complete or partial relief from rates in the case of certain hereditaments used for the purpose of hospitals, infirmaries, dispensaries, convalescent homes, sanatoriums, and other similar uses, or in connexion therewith."

Dr. Fremantle presided, on February 26th, over a well-attended meeting of the Parliamentary Medical Committee. The Committee considered a communication from the Asthma Research Council concerning a complaint received from a practitioner who alleged that his treatment of asthma had not been duly investigated. The Committee received a deputation from the Medical Practitioners' Union. Speaking for the deputation, Dr. GORDON WARD complained of the limitations on the prescriptions of panel practitioners. His union considered that the provision of drugs should be a separate benefit, but he admitted that there should be restrictions, and suggested modifications of the present procedure. Reference was made to the London list of prohibited drugs, which had been drawn up by the Insurance Committee and passed by the Panel Committee. The Parliamentary Medical Committee undertook to consider the question.

Local Government (Scotland) Bill.

On February 20th the House of Commons was again in committee on the Local Government (Scotland) Bill. Clause 25 provided against failure of the town councils of small burghs with respect to water supply and public health obligations. Dr. ELLIOT, for the Government, moved to modify the clause to enact that where the local authority of any area had failed to discharge its functions with respect to the provision of water supply, or of sewers, or drains, or with respect to housing, or had failed to discharge any other functions relating to public health, the department might authorize any other local authority to discharge the functions of the defaulting authority. In moving the clause Dr. Elliot said the Secretary of State for Scotland was precluded from doing so by influenza. Dr. DRUMMOND SHIELS agreed that these powers should only be put into operation after inquiry. By 196 to 86 the clause was amended as proposed by Dr. Elliot.

Clause 26 authorizes the county medical officer of health and sanitary inspector to act for small burghs. Mr. W. ADAMSON moved to leave out "or sanitary inspector." He declared that otherwise these burghs might be deprived of the services of whole-time sanitary inspectors. Sir ROBERT HORNE concurred.

Dr. ELLIOT said that of 179 small burghs in Scotland 26 had appointed the county sanitary officer to look after them, 106 had full-time officers, and 47 had part-time officers. The appointment was becoming more technical and skilled. The Scottish Board of Health had done its utmost to raise the status of the sanitary officer and to make clear that his position was in some ways more important than that of the medical officer of health. A whole-time sanitary officer could not be removed without the consent of the Board of Health, but they had known cases where pressure had been exerted on part-time officers. It was not suggested that a man would have to cover a whole county such as Lanark or Fife. He would work with assistants.

Mr. T. JOHNSTON denied that the administration of public health was inefficient in the small burghs. These burghs had a lower infantile death rate and lower death rates for ages under 25. When the burghs inspected milk and dairies, cows were inspected at least four times a year. Now, under the county councils, the inspection was at most twice a year, and in other parts once a year.

Dr. SHIELS remarked that the supporters of the amendment had not challenged the proposal to centralize under the county medical officers, although many burghs in Scotland would be reluctant to depart from having their own medical officers. He agreed that in some of the smaller burghs the work of the sanitary inspector could be better done by the county officer, but it was ridiculous to say that a burgh like Musselburgh, with a population of 17,500, had not sufficient work to occupy a full-time sanitary officer.

The LORD ADVOCATE (Mr. W. Watson) said the Government would accept the amendment provided it remained free to reinsert the words during the report stage or to make variations.

The House then agreed to the amendment not to make county sanitary inspectors the sanitary inspectors for small burghs.

Sir ROBERT HAMILTON then moved an amendment designed to leave the burghs freedom of choice in the appointment both of medical officer and of sanitary inspector. Under the clause as in the bill, the county medical officer or county sanitary officer would, in the event of a vacancy in the similar post in a burgh, be automatically appointed for the burgh unless the Board of Health agreed otherwise. Sir Robert thought that the town council of the burgh should be left to say if it desired that the county medical officer should be appointed medical officer of the burgh.

Dr. ELLIOT said the case for the appointment of the county medical officer to the smaller burghs was stronger than that for the appointment of the county sanitary officer; such appointments had been made by 100 out of 179 burghs affected. The medical officer had to deal with larger functions of health, which to a considerable extent were being transferred to the reconstituted county authority.

Dr. SHIELS could not support the amendment. The burghs which objected to appointing the county medical officer might not be the most suitable ones to have medical officers of their own. The medical officer of health of the smaller burghs had been a local figure of importance, and had in many cases done magnificent work, but with the advance of medical science, laboratory and scientific equipment, such as the small unit was unable to furnish, was needed to deal properly with public health. He agreed that places such as Rothesay, Oban, St. Andrews, and Dunoon, which had large summer populations, ought to have their own medical officers of health, and the Board of Health in Scotland would take advantage of the reservation in the clause permitting this. In medical matters the department of the Board of Health had always been up to date and progressive.

Dr. ELLIOT said the Board would take advantage of the provisions to deal with exceptional cases such as arose at seaside resorts. There were cases of small authorities appointing unsuitable men. A local authority in 1919 appointed a medical officer of health who did not possess the statutory qualifications, and the Board had to negotiate over the matter till 1928.

Sir Robert Hamilton's amendment was defeated by 233 to 43, and after minor amendments had been made the clause was added to the bill.

On February 21st Mr. ERNEST BROWN moved an amendment designed to leave out of the block grant the health grants. He said no issue in the bill caused more disquiet in the country than the change of grants for health services from the percentage to the block system. The amendment proposed to leave out from the operation of the block system the maternity and child welfare grant for Scotland, amounting to £157,000; the grant for tuberculosis treatment, amounting to £347,000; the grant for venereal disease treatment, amounting to £66,000; the grant for the welfare of the blind, £20,000; and the mental deficiency grant, £76,000—in all, £667,000. The block grant system would set up a competition among idealists in which one would want more money for tuberculosis treatment, another more for maternity and child welfare, and another more for the treatment of venereal disease.

Dr. ELLIOT said this was one of the major issues of the bill, and would confront Governments for many years to come. The percentage grants had worked unsatisfactorily in some cases. Large areas had no child welfare schemes at all. Under the bill the Highland counties would receive over £80,000 a year, and the Government would have power to call for the institution of such

services. The Government scheme provided cash and compulsion. Previously the local authorities had developed health services under the Poor Law in Glasgow, Aberdeen, and many of the burghs and counties of Scotland, although those services did not attract one penny of grant. The payment or withholding of a grant had not affected the hospital treatment of measles in Glasgow.

Mr. WILLIAM GRAHAM said that before the Meston Committee the Scottish Board of Health had given evidence supporting the percentage grant system as applied to public health services.

Mr. JAMES STUART said the Board of Health had coaxed Glasgow to increase the hospital treatment of measles and whooping-cough, and gave a grant of £20,000. To-day the average annual expenditure of Glasgow for the treatment of measles and whooping-cough was £21,000, but instead of getting £10,500, which was promised by the Government, the city was now only to receive £4,500. Last year Glasgow spent £116,000 on child welfare, and of that sum received £53,000 from the Government. Glasgow contemplated a development of its child welfare service and the provision of more maternity hospital accommodation, but under the bill it might not get any advantage under the block grant in respect of such developments. Glasgow was spending £220,000 annually on the treatment of tuberculosis, and hoped to open a new hospital this year costing in round figures £400,000, with 440 beds. All the charges for interest and sinking fund would have to be added to the maintenance of cases, and the cost per patient per week, including treatment and administration, would run from 55s. to 60s.

Dr. DRUMMOND SHIELS said no medical authority would have pleaded for a change from the percentage to the block grant system. Public health services were developing fast, and had in many cases doubled or trebled in amount since they were instituted. He hoped that even if all other services came under the block grant system an exception would be made for child welfare and maternity. Ante-natal supervision lessened the maternal death rate, and an adequate ante-natal service in every centre of population was essential. In Edinburgh, Glasgow, and other cities they had a fairly good service, but even in these places the number of centres was insufficient, while the accommodation and comfort were far from what they should be. Edinburgh contemplated a scheme for debilitated children which was to cost £25,000. Whether it would go on was now uncertain, as the past year had been the standard year under the bill, and any expenditure over the amount of that year would for the next three years fall on the ratepayers. The treatment of venereal disease was specially endangered under the block grant. It was an unpopular service, which previously got 75 per cent. from the State. Henceforth the local authorities would have to find 100 per cent., and the service would suffer, especially if the Government carried out its suggestion of dropping all assistance to propaganda. The blind rightly feared that under the new arrangement they would have cursory treatment from some of the local authorities. In the mental deficiency service a great advance was needed, and any grant based on the standard year would be inadequate. There was no place in Scotland where the health services were completely adequate to the needs of the community. Outside Glasgow, Poor Law institutions on the health side were by no means well equipped.

Dr. ELLIOT said the proposed grant was not a stereotyped block grant, but one with frequent periods of revision. Its operation could be watched and any errors corrected. If expenditure was good and commended itself to local authorities they would undertake it even if not immediately sure of recoupment by the central authority. If the local authorities so undertook expanding services the Exchequer contribution would recognize that in its successive revisions. The scheme provided a flexibility which had not hitherto existed in relations between the local authority and the central authority.

Mr. Brown's amendment was defeated by 174 to 102. An amendment by Dr. Shiels to except the percentage grants for maternity and child welfare was defeated without debate by 181 to 106. An amendment by Sir Robert Hamilton to except a grant to Highland counties was withdrawn after Dr. Elliot had explained that the Highlands and Islands medical grant had not been swept away, but would have to be substantially increased.

On February 22nd the House discussed Clause 48, which provides for contributions to voluntary associations in respect of the welfare of the blind and of mental defectives. Dr. DRUMMOND SHIELS moved to add a subsection providing that the central department might, before the beginning of each fixed grant period, make a scheme providing for the payment by county councils and town councils of large boroughs of specified amounts to an approved organization providing general publicity and educative propaganda in furtherance of the prevention and treatment of venereal disease. He said the proposal of the Government, as implied in the omissions from the bill, to drop the grants which had been previously made was unwise. His amendment had the approval of members in all parties. Last year the House had rejected the bill in which the Edinburgh Corporation sought power to compel those who suffered from venereal disease to undergo treatment. The House then decided, under the guidance of the Minister of Health, that the voluntary system was sufficient. Dr. Shiels held that a purely voluntary system would not stamp out these diseases, but it could not succeed unless the public understood and realized the seriousness of these conditions. A similar amendment to that he now moved had been put forward to the English Local Government Bill, and the Minister of Health could not accept it. In the present amendment, however, the word "may" had been substituted for the word "shall." A committee of the British Social Hygiene Council had carried on this propaganda in Scotland since 1921, giving lectures, advertising, and distributing literature, particularly in areas where cases were not coming to the clinics. The Scottish Board of Health had given £1,000 a year towards the work, and the report of the Board for 1927 declared that the work of the Scottish committee had been effective and of high value. Those who were in charge of the treatment of these diseases in Scotland were convinced that if things were left as in the bill the local authorities would not voluntarily contribute to the funds of such an association.

Dr. ELLIOT said propaganda with regard to venereal disease was of vital importance and in many ways better exercised from a central body than from a local body. There were conclusive difficulties against compelling local authorities to contribute to voluntary associations. Under the bill the small grants which had been made from time to time to this or that organization were being swept into a general pool, and that pool would be assigned to local authorities, who, he hoped, would then take upon themselves all and more than all the duties which the central department had previously stimulated them to carry out. Local authorities should feel full responsibility for all health activities in their area, including responsibility for propaganda. He proposed that the present grant from the central authority to the voluntary society should be continued up to May, 1930, and that a substantial additional sum be obtained from the Treasury towards the expenses of that society. He would also call a meeting of the local authorities who were particularly concerned in the matter and discuss the subject with them. He had no doubt they would agree on the health and propaganda work which they desired to carry on. The Government would act as banker for any sums which the local authorities might wish to spend on health propaganda, including that against venereal disease. The local authorities would themselves contribute freely and not under the compulsion of the central department. It might be that in future local authorities would wish to undertake this work themselves, but the position of the society would be safeguarded for a year. The danger that local authorities might not act was guarded against by Clause 50, which provided that the Secretary of State should be satisfied that a council had so carried out its obligations that the health of the inhabitants was unlikely to be endangered. The Department of Health in Scotland had no special appropriation for health propaganda or for preventive publicity work. Propaganda against venereal disease was clearly one of the health duties of local authorities. Care of mental defectives and of the blind was more welfare work than health work.

Mr. JAMES STEWART asked the Government to take power to deal with any local authority which was not continuing the propaganda against venereal disease. Some very considerable local authorities showed no enthusiasm in dealing with the disease.

Mr. ROSSLYN MITCHELL compared the growth of the campaign against venereal disease and the arousing of public interest to the steps taken to eliminate ophthalmia neonatorum in Glasgow. That disease had brought to Glasgow from 150 to 200 blind children every year, but in fifteen months from the introduction of compulsory notification and of public treatment there was no case, even of the loss of one eye.

Dr. SHIELS was glad to hear what Dr. Elliot offered to do, but could not regard it as a satisfactory substitute for the amendment. If Dr. Elliot would reconsider the matter before the report stage, Dr. Shiels would withdraw the amendment.

Dr. ELLIOT promised to bring the debate to the notice of Sir John Gilmour. Health propaganda should not be considered merely in relation to venereal disease, but on a somewhat wider ambit. The Government could not guarantee or suggest that the funds should be spent through certain organizations. Some entirely different method might be found.

Dr. SHIELS then asked leave to withdraw his amendment, and the House granted permission.

Clause 50, giving the Secretary of State power to reduce grants for inefficiency, was amended by adding maternity and child welfare, lunacy and mental deficiency, and the welfare of the blind as services in which efficiency could be demanded. The Lord Advocate desired to make clear that the clause applied to welfare services as well as to health services.

On February 25th Mr. MACROBERT, Solicitor-General for Scotland, moved a new clause to enable local authorities to submit schemes for reorganization with a view to removing the distinctions between Poor Law patients and the public health patients, and to provide for hospital treatment under the public health authorities and not under the Poor Law. He said that in the clause there were safeguards with regard to the voluntary hospitals, and one of the objects of the clause was to secure co-operation between the public authorities, the voluntary hospitals, and the medical schools. The schemes for reorganization had to be submitted to the

Secretary of State for Scotland by the various authorities, either county council or borough council. A wider definition was given of the words "hospital facilities." Power was given to the authorities to spend money in extensions where the present facilities were inadequate. The department would satisfy itself with regard to an appropriate scheme by inquiry, not necessarily by a formal or local inquiry. In the event of a scheme not being approved on terms by the department they might modify or amend it. Statutory powers were given to the authorities in connexion with general hospital services. At present they only had statutory powers in regard to hospitals for infectious diseases. The powers were to be extended to general hospitals. Authorities were granted power to give hospital services for people living in another area.

Mr. STEWART urged that it should be made obligatory on every county council and town council to prepare a scheme for the consideration of the central department.

Lieut.-Colonel MOORE said he represented some of the most progressive seaside towns in Scotland. In the arrangements made for a very large summer population hospital accommodation was very prominent. In certain cases the town councils had established very fine hospitals for fever and other cases, and out of the rates they had practically paid off the entire capital cost incurred in building and equipping the hospitals. Under this new clause these hospitals would be taken over by the new county authorities, and as far as he could see no question of compensation arose.

The CHAIRMAN pointed out that Colonel Moore could not raise that question at that point as it came under Clause 6.

Lieut.-Colonel MOORE said that in that case he would ask the Government to bear in mind that there was a feeling that these towns should be compensated for the capital expenditure which they had incurred in respect of these hospitals.

Dr. SHIELS said that the Labour party agreed with the main principles of the clause, but there were certain features which they would like to see altered. In the larger industrial districts in Scotland and England hospital arrangements were in a more or less chaotic condition. Reorganization in these cases was absolutely essential if the full facilities available in the public and voluntary hospitals were to be utilized. If the clause was to be permissive they would still be left in the same old position with regard to reactionary or lazy authorities. One of the hopeful features of the section dealing with the extension of hospital facilities was that it provided some remedy for the serious condition of the voluntary hospitals as regarded their accommodation. The Mackenzie Commission, which reported in December, 1925, gave the total number of voluntary hospital beds in Scotland as 8,589. There had probably been an increase since that time, but they estimated that 3,600 additional beds were immediately needed in order to provide the necessary accommodation. The Edinburgh Royal Infirmary had a waiting list of over 2,000 people, many of them being cancer cases. The same was true in regard to Glasgow, and indeed the voluntary hospitals of Scotland did not provide except very partially for the needs of the community. In the Poor Law hospitals and sick wards of poorhouses there were 6,100 beds. Of that number 4,285 were grouped in the larger Poor Law hospitals. One effect of this new clause would be that in those cases where the Poor Law beds were not fully occupied they would be available to the local authority to meet the needs of the sick people in the district. It was surely even more necessary that immediate steps should be taken, seeing that there were these facilities, to prepare a scheme, not only for co-ordination, but for making the necessary additions and extensions in areas which quite evidently required it. In regard to the inquiry mentioned by the Solicitor-General, he wished to know whether it was a public inquiry with witnesses, whether it was likely to be expensive, with counsel representing the various conflicting authorities, and whether people with vested interests would be able to object to the necessary extensions and either defeat the object of the local authority or add considerably to its expenses in establishing approval of the proposed scheme.

After further debate the LORD ADVOCATE said that the Government felt that it would be a bit hard and unwise to make the preparation of schemes mandatory in the way which had been suggested. But he would point out that under Clause 50 every local authority was bound to exercise its functions up to a certain standard and to provide adequately for the health of the people in the district. The word "function" was defined as including not only duties but powers, and as a lawyer he said that the power which was conferred on local authorities in this clause was one which they would be bound to exercise, otherwise their grant would be reduced.

The clause was read a second time and added to the bill.

The LORD ADVOCATE moved a new clause dealing with the recovery of expenses in connexion with the treatment of the sick. He said that at present the Poor Law authority had power to recover expenses for the treatment of poor persons from those who were legally liable for the maintenance of those persons, and it was now proposed that all the hospitals under the new sick persons scheme should be put more or less on the same basis. The Poor Law power, of course, would remain with the new body. There was an exception in the case of infectious disease, and the reason for that was obvious. According to the customary practice patients were compulsorily removed for the benefit of the community at large, and that made all the difference. The amount to be recovered was limited to a reasonable amount.

Dr. SHIELS said that he was glad that the Government had now amended this clause in accordance with suggestions made by the Opposition, and to that extent he thought it was a great improvement on the original drafting. The use of the word "reasonable" was a great improvement. But they protested against the distinction still drawn between infectious and other diseases. He would like to say something about the maternity hospitals. A great deal was being done in regard to the reduction of maternity mortality, and one proposal which seemed likely to be fruitful was that, instead of one big maternity hospital, there should be a number of smaller hospitals in different parts of the town or the county where patients could be more readily and quickly attended and where a certain amount of isolation could be secured in cases where there was an infective condition. There was great scope for this development, because they knew that diseases associated with these conditions were responsible not only for many deaths, but for a great deal of chronic ill health. They wanted to encourage the most ample provision for maternity hospitals. Yet in spite of the optional nature of this clause, and in spite of the insertion of the word "reasonable," it was still possible under it that a maternity hospital would have charges so high that women who required the treatment very badly would not be able to take advantage of its facilities. Therefore he urged the Lord Advocate very strongly to concede the exemption of maternity hospitals from the general operation of the clause.

After further debate the clause was read a second time and added to the bill.

An amendment moved by Dr. SHIELS to exempt maternity homes from the clause was rejected by 203 votes to 88.

The committee stage was completed, and the bill as amended was reported to the House.

Assessment of Voluntary Hospitals.

In an answer to Mr. Robert Morrison, on February 20th, Sir KINGSLEY WOOD said the Rating and Valuation Act had not altered the basis of the valuation of hospitals. It was open to assessment authorities now, as heretofore, to adopt a basis which would take full account of the special circumstances of voluntary hospitals dependent on contributions from the public and of the responsibilities, conditions, and restrictions which affected their rateable value. Full rights of objection and appeal were available to any governing authority which was not satisfied that due regard had been paid to these factors and was aggrieved by the assessment proposed. Sir Kingsley repeated the declaration previously made that the de-rating of hospitals could not be considered apart from the de-rating of other charitable institutions, and that legislation to that end could not be introduced in the present Parliament. He added that the British Hospitals Association, at Mr. Chamberlain's suggestion, proposed to submit to the Central Valuation Committee proposals for greater uniformity in the assessment of voluntary hospitals and the adoption of a generally acceptable basis of valuation. This suggestion had been adopted after an interview between the Minister of Health and the representatives of British hospitals.

Dr. VERNON DAVIES asked whether the Parliamentary Secretary was prepared to support the proposals of the British Hospitals Association when these came before the Central Valuation Committee.

Sir KINGSLEY WOOD replied that the Ministry would do all it could to assist, but had no statutory authority to interfere with the policy of the Central Valuation Committee. That committee had made certain suggestions which would promote uniformity and might lead to good results.

Report on Mental Deficiency.—Lord EUSTACE PERCY announced, in an answer to Mr. Robert Morrison on February 21st, that he was arranging for the publication of the first section of the report of the Departmental Committee on Mental Deficiency. This report would include all the committee's findings and recommendations on matters falling within the scope of the Board of Education and of the local authorities, together with the report of a survey of the incidence of mental deficiency in certain typical areas, carried out by one of the medical officers of the Board of Control. Lord Eustace Percy feared these documents would not be available before Easter. He thanked the committee for its valuable report, which would greatly assist all interested in the education of mentally deficient children.

Invaliding for Tuberculosis.—Colonel HEADLAM, on February 20th, stated that since the new rules relating to the assessment of attributability of tuberculosis came into operation in the Navy, on October 1st last, 70 cases of invaliding for tuberculosis had been considered. In 46 cases disability pensions had been granted, and 10 cases were under consideration. Ten cases dealt with before October 1st had been reconsidered, and, in the absence of fresh medical evidence, the original awards had been maintained. Dr. Shiels was informed, on February 21st, that the Secretary for Scotland could not give the number of tuberculous ex-service men in Scotland apart from those on the registers of the Ministry of Pensions.

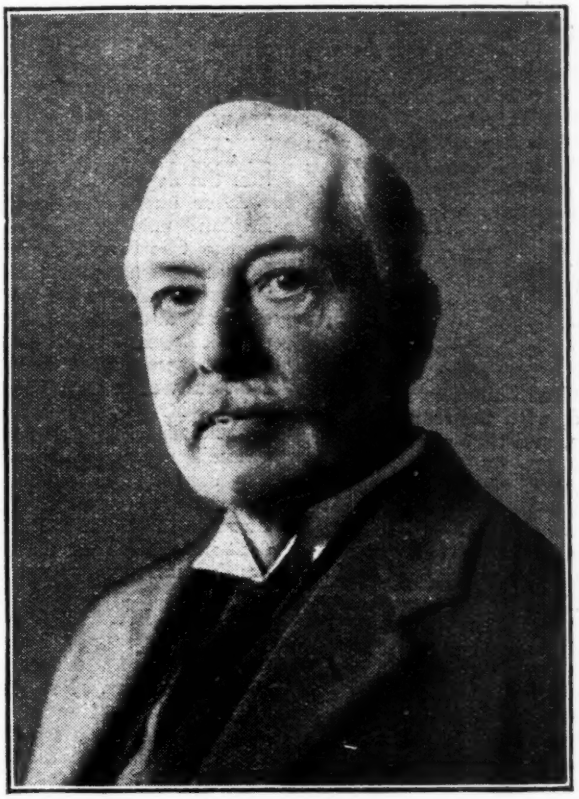
Obituary.

G. NEWTON PITT, M.D., F.R.C.P.,

Consulting Physician to Guy's Hospital.

WE much regret to announce the death, on February 22nd, at Walton-on-Thames, after a short illness, of Dr. G. Newton Pitt, for many years physician to Guy's Hospital, and for the past fifteen years intimately associated with the work of the Royal Medical Benevolent Fund.

George Newton Pitt was born in London on October 15th, 1853, the eldest son of George Pitt of Sutton, Surrey. From Christ's College, Finchley, he went to Clare College, Cambridge, with a scholarship, and was placed tenth wrangler in the Mathematical Tripos of 1876. In 1879 he was elected a Fellow of Clare College, and during the tenure of his Fellowship studied medicine at Cambridge and at Guy's, qualifying as M.R.C.S. in 1881. In 1884 he graduated M.D., B.Ch.Cantab., and obtained the M.R.C.P. Lond. diploma. In 1890, the year after his election as a Fellow of the Royal College of Physicians, Dr. Pitt was appointed Goulstonian lecturer. In 1903–7 he served as examiner to the College, was a member of the Council in 1907–9, Bradshaw lecturer in 1910, censor in 1914–15, and senior censor in 1918. His Goulstonian Lectures on "Some cerebral lesions" were published in the first volume of the *British Medical Journal* for 1890, and his Bradshaw Lectures on "The results of bronchial obstruction" appeared, with illustrations, in our issue of December 10th, 1910. From 1887 onwards Dr. Newton Pitt was a member of the staff of Guy's Hospital, serving in turn as demonstrator in morbid anatomy, assistant physician, physician and lecturer in medicine, and, finally, as consulting physician. In the early part of his career he was also assistant physician to the East London Hospital for Children at Shadwell, and was for some time an examiner in medicine to the Universities of Cambridge and London. For his war services as major, attached to the 2nd London Territorial General Hospital, he received the O.B.E.



DR. NEWTON PITT.

Dr. Newton Pitt was for many years a member of the British Medical Association; he held office as vice-president of the Section of Pathology at the Annual Meeting of the Association at Manchester in 1902, and as vice-president of the Section of Medicine when the Association held its Annual Meeting at Exeter in 1907. Besides his Goulstonian and Bradshaw Lectures, and contributions to Allbutt's *System of Medicine* and Allchin's *Manual of Medicine*, he was the author of a number of papers in *Guy's Hospital Reports*, and between 1901 and 1908 contributed eight articles to the *British Medical Journal*, mainly on diseases of the heart and of the central nervous system. His presidential oration before the Hunterian Society was entitled "John Hunter as a physician and his relation to the medical societies of the last century." To his invaluable work for the Royal Medical Benevolent Fund, from the time of his appointment as honorary secretary in 1914, a tribute is paid by his former colleagues in the appreciations printed below.

His active years at Guy's were marked by unremitting attention to the patients under his care, and to his duties as a teacher of clinical medicine. His intimate knowledge of morbid anatomy, gained as a demonstrator in this subject over several years, illuminated the bedside teaching, and gave an authority to his instruction of the highest order, while his constant attendance at operations which he had advised gave him a knowledge of living pathology and that form of information so essential to a physician dealing with acute abdominal conditions. His clear logical mind enabled him in his teaching to sift the material, to free it from ambiguities, and present the subject in hand in a manner to be grasped by the student. The teaching was illustrated from a wide and well-garnered experience, was never diffuse, and the essentials were impressed as by the hand of a master. These same qualities were of signal service in the management of the medical school, and on the various committees co-ordinating the relation between the hospital and the school, where his opinion, always given after mature reflection based upon a knowledge of the subject which he had been at pains to acquire, carried great weight.

Sir CHARTERS SYMONDS, consulting surgeon to Guy's Hospital and honorary treasurer of the Royal Medical Benevolent Fund, writes:

As a colleague Dr. Newton Pitt gained the esteem and affection of all the members of the staff, and was beloved by the students, many of whom became his intimate friends. For many years he was consulting physician to the London Orphan School, where his services were frequently called upon. The Royal Medical Benevolent Fund has lost in Dr. Newton Pitt an honorary secretary who for fifteen years gave devoted service to the relief of numbers of the profession and their dependants. It was his special part to investigate all applications, by examination of statements, and often by personal interviews. Over this he spared no trouble, and when the application was placed before the committee his award was almost invariably accepted. Before the present secretary was appointed and the present offices were established the duties demanded daily supervision, a special corner of his study being set apart for the purpose. He had an intimate knowledge of both annuitants and grantees, and, while always sympathetic, was careful to see that charity was wisely distributed, and that overlapping of other bodies was safeguarded. His financial abilities were of no mean order, and his knowledge of accounts always of value. It will be difficult to find another with so original a mind, of so wide an experience, with such a knowledge of the needs of the profession, and one who is able and willing to sacrifice so much of his leisure to fill his place. No one seeing his clear mental grasp of a problem, his untiring energy, his deep interest in the affairs of the Fund, as exhibited at the meeting in the week preceding his death, could but anticipate many years of active work. It is not improbable that the severe attack of influenzal pneumonia last year seriously weakened his powers of resistance.

Dr. JOHN FAWCETT, consulting physician to Guy's Hospital, writes:

Dr. Newton Pitt was one of the three physicians appointed on the staff of Guy's in 1887 to fill the vacancies resulting from the rapid promotion among the junior members which ensued, in the main, as a sequence of the

appalling series of disasters which befel the medical staff from the year 1883 to 1887; I mean the deaths of those famous physicians, Fagge, Moxon, Mahomed, and Carrington. Dr. Leonard Wooldridge and Dr. Cooper Perry, as he then was, were the other two physicians appointed at the same time, and before two years were out Guy's had lost that brilliant genius Wooldridge, to be followed but a few years later by the deaths of Dr. Washbourn and Dr. J. H. Bryant. Dr. Pitt came to Guy's with a great reputation from Cambridge, where he had taken high rank as a wrangler, and later was elected a Fellow of his College, Clare. Throughout his period of service on the active staff of Guy's, which ended in 1913, he entered heart and soul into all the activities of both the hospital and its school.

Perhaps the features which we, as students, remember best were, first, his superabundant energy, the almost meticulous thoroughness with which he investigated the cases under his care, especially those in relation to the central nervous system, in which he was particularly interested, and where he did such good pioneer work. His brain to us seemed teeming with so many facts, with time as the sole brake to the expression of what he could do and say, and where we learned, meanwhile, of many things of which we had not even dreamt before. Fatigue was altogether foreign to his mind and nature, although by no means so to the somewhat exhausted members of his "firm," male and female, who followed in his train, at the end of a long round. Some years later, when no longer a student, I ventured to ask him if he was ever tired, and he replied, "I don't remember it," and I believe he spoke the truth. But some few days ago I met him in the "Tube" on his way to the Alliance Assurance Company, where he had been one of the medical officers for a great number of years, and he looked as well, almost as young, and spoke as robustly as ever. The only complaint he had to make was that someone had advised him recently to have all, or most of his teeth extracted, with the result that he had been uncomfortable ever since, and that was all he had to say in reference to the present state of his health. It seems impossible to realize that he is gone, and that we, and all who knew him so well at Guy's and elsewhere, have lost a very dear friend.

The other chief characteristics to my mind, and, indeed, to that of others also, were his geniality, his good humour, his love for his fellow man, particularly if he came from Guy's, and his wish to do something for him if he could. He was such a gentleman. As students we always spoke of him as "dear old Pitt"; irreverent it was, but the phrase seems to enshrine his memory, and to describe with truth the affectionate regard in which he was held by all the students, by his own house-physicians, and by his colleagues on the staff—and what can man want more! When the war came, though over 60 years of age, Pitt worked devotedly from first to last at the 2nd London General Hospital, where he held the rank of major; and also, if I recollect aright, he acted as physician at another war hospital, King George's, as it was called.

Outside Guy's the work for which he will, and should, ever be remembered is that which he did for the Royal Medical Benevolent Fund. Sir Charters Symonds recalls in the *Times* of to-day (February 26th) how that Pitt became secretary of the Fund in 1914, and that to Pitt fell a large part of the additional work entailed in the collection, the management, and the distribution of the £20,000 collected from the medical profession, with the added £10,000 from the National Relief Fund. The money was to assist financially the medical officers, especially of the Territorial Army, who had suffered loss either themselves, or, it might be, their families, from whom the breadwinner had been taken or who had died. Ever since Pitt became secretary the interests of the Fund were his constant care, and, while anxious to see it develop on a wider and more broadly comprehensive basis, yet he never failed to devote daily consideration to the numerous cases which came for relief. To those who might wish to do something to perpetuate their affection for Dr. Pitt I can imagine nothing which would have more appealed to him than an attempt to render this Fund even more generally recognized in our profession than it is at present, to have it regarded as a liability which every medical man should incur by becoming an annual subscriber. Dr. Pitt was ever grateful for the support accorded to the Fund, increasingly so of recent years, by the members of the British Medical Association.

This brief sketch, written at such short notice, does but meagrely fulfil its aim; but it may perchance serve in part, though inadequately, to express the feelings and thoughts of some who knew Pitt well, and who realize to the full how rich was his life for others, and therefore so happy for himself. He loved his life and his work, and, sad as we are to lose him, yet we recognize that, not only did he play the game hard throughout his long life, but that he put many a good innings to the credit of his side.

[The photograph of Dr. Newton Pitt is by Elliott and Fry, Ltd., London.]

DENIS WALSHE, M.D.,

Past-President, South-Eastern of Ireland Branch, British Medical Association.

WE regret to record the death, at the age of 85, of Dr. Denis Walshe, which took place at his home in county Kilkenny on February 21st. Dr. Walshe received his medical education at the Catholic University, Dublin, and at Edinburgh. In 1869 he obtained the L.R.C.P. and L.R.C.S.Ed. diplomas, and in 1871 the L.R.C.P.I. and L.M. In 1915 the National University of Ireland conferred on him the degree of M.D. (*honoris causa*).

After qualifying Denis Walshe spent several years in England holding appointments as resident medical officer at the Chorlton Hospital, Manchester, and later at the Poplar and Stepney Sick Asylum, London. On returning to Ireland he was appointed to the Tiscoffin Dispensary district, and proceeded to build up an extensive private practice. In 1883 he became medical officer to the Graiguenamanagh Dispensary District, and in 1903 coroner for South Kilkenny, both of which offices he held until his death. Dr. Walshe was an active and loyal member of the British Medical Association. He was a member of Council nearly continuously from 1900 to the day of his death, and a member of the Irish Committee since 1923. In 1900 he was a member of the South-Eastern of Ireland Branch Council, becoming its president in 1901. He represented the Kilkenny Division of the South-Eastern of Ireland Branch Council in 1916, and the Carlow and Kilkenny Division during the period 1917–29. From 1916 he was a member of the South-Eastern of Ireland Branch Ethical Committee, and since the passing of the Insurance Act he was chairman of the local committee. For nearly sixty years he never missed an Annual Meeting of the British Medical Association; indeed, although his health was so poor last year that he was urged by his medical friends not to undertake the long journey, he attended the Annual Meeting at Cardiff. A few days before his death he received a letter from Dr. Alfred Cox, the Medical Secretary, which he greatly appreciated, and showed with pride to his medical friends when they called to see him, and the Council at its last meeting also asked the Chairman of Council to send its wishes for his recovery and its appreciation of all his good work for the Association. Denis Walshe was a genial and companionable friend and the soul of hospitality. His funeral was attended by a large number of medical colleagues and friends, including Dr. T. Hennessy (Irish Medical Secretary), who travelled from Dublin to be present.

Dr. ALFRED COX writes: The Association has had many loyal and devoted members in Ireland, but none in my time whose personality was so distinctively associated with those lovable and humorous qualities one is inclined to think of as being peculiarly Irish. I never realized what a power he was for good until I met Dr. Walshe on his own ground in his own Branch two years ago. I then saw what a great factor he had been in preventing among the medical profession the growth of any semblance of a division between North and South. During times of great stress and difficulty he kept the B.M.A. flag flying (and thereby preserved the union of the Irish medical profession), being backed in this by others in both South and North. For this alone he deserves our gratitude and remembrance. But many of us will miss even more the loss of that exceedingly

charming personality without which the Annual Meeting will seem something different and less attractive. He was for many years a member of our Council, and rarely said a word, but there were few more popular or more deservedly respected members of it.

The death occurred on February 20th, at his residence, Old Castle Gate, Banff, of Dr. WILLIAM FERGUSSON, a well-known practitioner in the North of Scotland. Born in 1855, he was a son of the Rev. William Fergusson, Free Church minister at Ellon, and went through the medical course of Aberdeen University. He graduated M.B., C.M. with highest honours in 1877, proceeding M.D. in 1879. His first four years of professional life were spent in practice at Fraserburgh, but he went to Banff in 1880, where he spent forty-nine years, gaining a great reputation both in family practice and as a consulting physician, for which his services were in request over a large area in the North of Scotland. Dr. Fergusson held various official positions, being consulting surgeon to Chalmers's Hospital, surgeon to Banff Prison, parochial medical officer for Boyndie and Alvah, and Admiralty surgeon and agent in Banff. He was associated for a long time with the local Volunteer Force, and held the position of surgeon colonel to the 1st Banff R.G.A. Volunteers, in which his long period of service was recognized by the Volunteer Decoration. He was an active member of the British Medical Association, and had attained the position of president in the Northern Counties of Scotland Branch and in the Aberdeen Branch of the Association. He was also a justice of the peace for Banffshire. From time to time he contributed articles to various medical journals, chiefly upon subjects in the department of gynaecology. Four years ago he retired from private practice, but still maintained his connexion with Banffshire Asylum, where he continued to act as visiting physician. He is survived by a widow and one son.

Dr. J. LOGAN STEWART, consultant tuberculosis officer to the Lancashire County Council, died in Manchester from pneumonia on February 20th, at the age of 49. Dr. Stewart received his medical education in Glasgow, graduating M.B., Ch.B. in 1905; he obtained the diploma D.P.H.Camb. in 1908. He entered the service of the Lancashire County Council as medical inspector of schools in 1909, and in July, 1913, he was appointed consultant tuberculosis officer for the south-east portion of the county, at present containing a population of 370,000 persons, with a chief dispensary at Ashton-under-Lyne and five branch dispensaries in neighbouring towns. Dr. Stewart was the first member of the tuberculosis medical staff of the Lancashire County Council to undertake his own *x*-ray work, and he developed this to the highest degree of efficiency. He contributed several chapters on this subject to the annual report on the tuberculosis work in Lancashire, and an article entitled "The value of *x*-ray work in a tuberculosis dispensary" appeared in *Tubercle* in 1927. He also rendered important pioneer service in regard to the treatment of tuberculosis by artificial light at centres established in tuberculosis dispensaries. After two years' experimental work at the one in Ashton-under-Lyne he proved that this treatment was particularly valuable in the case of lupus and adenitis with abscess formation and skin involvement. In the past twelve months Dr. Stewart had devoted much time to the question of tuberculosis and silicosis, and contributed an article to the *British Journal of Tuberculosis* last January. He was engaged in further research on silicosis at the time of his death. For the following note of appreciation we are indebted to Dr. G. Lissant Cox, central tuberculosis officer to the Lancashire County Council: In the last ten or fifteen years the tuberculosis service in the North of England has had two exceptionally gifted clinical tuberculosis officers—the late Dr. W. C. Rivers, district tuberculosis officer of the West Riding County Council, and John Logan Stewart. Stewart was a typical Lowland Scot. Austere yet kind, bent but not broken by the death of his wife some three years ago, engrossed in his work, possessed of a sure judgement and an entirely unselfish nature: these qualities made him loved and respected by all his colleagues, patients, and the doctors who so frequently consulted him. Visitors from many lands went to Ashton-under-Lyne; all returned impressed with Stewart's work. But this it was which made him stand out above the crowd: woven into every part of his being, and controlling his unceasing work, was a fierce yet sane sympathy with the sufferer from tuberculosis. For such sufferers he lived, and for them he died. A colleague (J. R. K.) writes: The passing of John Logan Stewart will be regretted with particular poignancy by his old classmates of Glasgow University. One remembers the steadfast honesty of his mind and the most lovable gentleness of his manner. Whatever Stewart set his hand to he did with all his might. Many will miss his counsel, as a tuberculosis specialist, as an expert in the radiology of the chest, or in the theory and practice of ultra-violet ray treatment. But all who knew him will cherish the memory of his sterling character and of his full-hearted devotion to the cause of the suffering.

Dr. GEORGE SCARR died on February 11th, at the age of 76, after a life devoted to many kinds of public service and spent mainly at Radcliffe in Lancashire. He received his medical education at Trinity College, Dublin, where he graduated M.B. in 1884, and obtained the diploma L.M. of the Rotunda Hospital; he became L.R.C.S.I. in 1906. More than thirty-two years ago he went to Radcliffe and joined the late Dr. Gill in partnership, but found time in the course of a busy practice for energetic work in connexion with the urban district council and the St. John Ambulance Brigade. For many years he was the chairman of the local health committee; he presided over the district council from 1919 to 1921. He actively associated himself with the establishment of the Bealey Convalescent Home and its use as a maternity home. He represented the Radcliffe district on the Bury and District Joint Hospital Board; after election to the county council he became a member of its public health committee and devoted himself unsparingly to the improvement of health conditions generally, and in particular to forwarding the work of the Sick Nursing Association. In 1901 he was appointed honorary surgeon to the local St. John Ambulance Brigade and Sick Nursing Division and helped them to obtain well-equipped accommodation, which served during the war as a military auxiliary hospital, of which he became superintendent. For these services he was awarded the O.B.E. in 1920. Educational progress in Radcliffe owed much to his personal support; he was one of the strongest advocates of the establishment of the public library, and was chairman of the Library Committee. Dr. Scarr was vicar's warden of St. John's Church for more than twenty years, a lay representative to the National Assembly, and a member of various diocesan and rural-decanal organizations. In 1917 he was appointed a J.P. for the County of Lancaster. For many years he was a member of the British Medical Association; he served on the Lancashire County Panel Committee, and was chairman of the Insurance Committee. His personal popularity and the grateful recognition of his services drew a large congregation to the funeral service on February 14th in St. John's Church.

Dr. PERCY ASHWORTH, who died at the age of 54, on January 26th, received his medical education at Owens College, Manchester. He obtained the diplomas M.R.C.S., L.R.C.P.Lond. in 1887, graduated M.B., B.S., with honours, in 1888, and proceeded M.D. and F.R.C.S. in the following year. During his distinguished career as a student he won numerous honours, including a gold medal in physiology and various medical and surgical scholarships. He had conducted for many years a large practice in Southport, and held the appointment of assistant surgeon to the Clinical Hospital for Women and Children in Manchester. He was an ex-president of the Southport Medical Society, and for many years had been a member of the British Medical Association. He had contributed articles on surgical subjects to the *British Medical Journal* and to the *Transactions of the Manchester Pathological Society*.

Universities and Colleges.

UNIVERSITY OF OXFORD.

As announced in our advertisement columns, an examination for the Theodore Williams Medical Scholarship will begin on June 4th. It is of the value of £100 a year, and tenable for four or five years. Full particulars can be obtained on application to the Senior Tutor, Pembroke College, Oxford.

UNIVERSITY OF LONDON.

THE Senate has accepted with thanks an offer by the trustees of the late Mr. C. H. Clark of £10,000 for the establishment of a lectureship in the history and progress of preventive medicine and tropical hygiene, and also a grant of £1,000 from the Beaverbrook Fund for Medical Research, forwarded by the Prime Minister. The grant will be applied to the purposes of, and administered under the scheme for, the Thomas Smythe Hughes Medical Research Fund.

Professor W. E. Le Gros Clark has been appointed, as from September 1st, to the University Chair of Anatomy, tenable at St. Thomas's Hospital Medical School.

A degree of Ph.D. has been instituted in non-clinical subjects for both internal and external students in the Faculty of Medicine.

The Geoffrey E. Duveen Travelling Studentship in oto-rhino-laryngology, of the value of £450, has been awarded for 1929 to Mr. Nehemiah Asherson, M.B., B.S., F.R.C.S.

On the recommendation of the School Committee of University College Hospital Medical School, Dr. G. R. Cameron has been appointed to the Graham Scholarship in Pathology for two years, from September 1st, 1928.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have passed in the subjects indicated:

SURGERY.—T. A. Barnabas, C. M. Brooks, N. Das, H. W. E. Dickey, R. Frankling, K. E. Gallaher, K. Girgis (Section I).
MEDICINE.—W. A. A. Collington, H. M. Feldman, L. P. Gregory, C. K. McCoan, C. F. C. White.
FORENSIC MEDICINE.—C. W. Ellison.
MIDWIFERY.—R. K. Nandlal, C. Skinner.

The diploma of the Society has been granted to Messrs. T. A. Barnabas, C. M. Brooks, W. A. A. Collington, N. Das, L. P. Gregory, C. K. McCoan, and C. F. C. White.

Medical News.

MR. A. W. SHEEN, F.R.C.S., professor of surgery and director of the surgical unit of the Welsh National School of Medicine, will deliver the Hunterian Oration before the Hunterian Society at the Mansion House, E.C., on Monday, March 4th, at 9 p.m.; the subject is some aspects of the surgery of the spleen, illustrated by lantern slides.

A SPECIAL discussion on industrial dermatoses, their causation, recognition, prevention, and treatment, arranged by the Sections of Dermatology and Epidemiology of the Royal Society of Medicine, will take place at 1, Wimpole Street, W., on Thursday, March 21st, at 4.45 p.m. A selection of cases will be shown at 4 p.m.

UNDER the auspices of the Chadwick Trust a Malcolm Morris Memorial Address will be given by Sir Norman Walker at 5.15 o'clock, on May 16th, at the Royal Society of Arts, with Sir StClair Thomson in the chair.

THE annual general meeting of the Medical Officers of Schools Association will be held at the rooms of the Society of Medical Officers of Health, 1, Upper Montague Street, Russell Square, W.C.1, on Friday, March 15th, at 5 p.m.; tea will be served at 4.30 p.m. Sir Henry Gauvain, medical superintendent, Lord Mayor Treloar Cripples' Hospital and College, will read a paper on the combined education of children suffering from physical defects.

AN intensive post-graduate course in general medicine and surgery, including the special departments, will be held at the West London Hospital from March 11th to March 23rd. The fee for the course is six guineas. Full particulars can be obtained on application to the dean, West London Hospital, Hammersmith, W.6.

AT the East London Hospital for Children, Shadwell, E.1, interesting cases will be demonstrated by the honorary staff on Wednesday, March 6th, at 4 p.m. Tea will be served at 3.45 p.m. Medical practitioners are cordially invited.

A SPECIAL two weeks' course in orthopaedics will be given at the Royal National Orthopaedic Hospital, Great Portland Street, W., from March 11th to 23rd. The fee for the course, which is open to all post-graduates, is three guineas.

THE Fellowship of Medicine announces that on Monday, March 4th, at 5 p.m., at the Medical Society, 11, Chandos Street, Cavendish Square, Mr. Herbert Paterson will deliver a lecture on pitfalls in radiology. A demonstration will be given by Mr. E. T. C. Milligan, on Thursday, March 7th, at 5 p.m., at the St. Mark's Hospital, City Road; and on Wednesday, March 6th, at 4 p.m., Dr. S. A. Henry will give a lecture-demonstration at the Wellcome Museum of Medical Science, 33, Gordon Street, on the industrial cancers and their importance in the investigation of the problem of new growth. There is no fee for attendance at the above lecture and demonstrations. From March 11th to 23rd the Royal National Orthopaedic Hospital will hold an all-day course in orthopaedics if there are not fewer than ten entries; a course in ophthalmology will be held during the same period at the Royal Eye Hospital, consisting of clinical demonstrations each afternoon. Courses in April will deal with tropical medicine, electrotherapy, medicine, surgery and gynaecology, neurology, and a practitioner's course in general medicine and surgery lasting for an hour and a half in the late afternoon. Copies of all syllabuses, and details of the general course of work in the London hospitals associated with the Fellowship of Medicine, are obtainable on application to the secretary of the Fellowship, 1, Wimpole Street, W.1.

UNDER the auspices of the National Council for Mental Hygiene Dr. Bernard Hart will deliver a lecture on the minor mental disorders of everyday life, at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Wednesday, March 6th, at 5 p.m.

THE Royal Sanitary Institute will hold its Institute Dinner on Thursday, March 21st, at the Hotel Metropole, with the president, the Duke of Northumberland, in the chair.

DURING Easter a week's excursion for medical practitioners and their families will be arranged to the Mediterranean coastal resorts, including Cap d'Antibes, Juan-les-Pins, Cannes, Le Cannet, Grasse, Vence, Mentone, Monaco, Monte Carlo, and Beaulieu. Further information may be obtained from the president of the Société Médicale du Littoral Méditerranéen, 24, Rue Verdi, Nice.

THE Water Pollution Research Board of the Department of Scientific and Industrial Research issues periodically in typescript a summary of current literature bearing on water supplies, sewage, trade waste waters, river pollution, and kindred subjects. The issue for January has been placed in the Library of the Association, where it will be available for the use of members.

THE Savill prize (value £15) of the West End Hospital for Nervous Diseases is offered in 1929 for the best thesis on a neurological subject submitted to the examiners not later than October 31st. The prize is open to post-graduates who have attended the practice of this hospital on at least ten occasions, and candidates must submit the subject of their choice for the approval of the examiners not later than April 9th. Full particulars may be obtained on application to the secretary, West End Hospital for Nervous Diseases, 73, Welbeck Street, W.1.

DR. P. MERRIN has been unanimously appointed chairman of the Kingstown Urban District Council. This is the first time a medical man has been appointed to this office in the premier township in the Irish Free State. Dr. Merrin has acted as a chairman of the Public Health Committee for the past nine years.

AT the end of 1928 *Lijecnicki vjesnik* ("The Medical Advertiser"), the monthly journal of the Croatian Medical Society in Zagreb, celebrated its fiftieth anniversary. During its existence this periodical has developed gradually from a modest beginning, and has published 1,554 articles by 606 different authors; the rapidity of its recent growth is indicated by the fact that in 1928 it published 211 articles by 176 different authors.

THE annual congress known as the Journées Médicales de Paris will be held from June 9th to 14th. The subscription is 50 francs. Further information can be obtained from Dr. Léon Tixier, 18, Rue de Verneuil, Paris.

THE Annual Congress of the German Roentgen Society will be held in Vienna from April 20th to 22nd, under the presidency of Professor Hans Meyer of Bremen.

THE two German-Spanish journals named *Revista Medica de Hamburgo* and *La Medicina Germano-Hispano-Americana* have been united into a single organ, entitled *Revista Medica Germano-ibero-Americana*, under the direction of the two previous editors, Professor Mühlens of Hamburg and Professor J. Schwalbe of Berlin.

DR. LUDWIG ZAMENHOF, the inventor of Esperanto, has recently celebrated his seventieth birthday.

THE following resolution adopted by the Grand Council of the National Citizens' Union has been sent to the Minister of Health: "With a view to the reduction of the numbers of mentally afflicted, unfit, and diseased persons, an inquiry should be held into the best method of dealing with mental deficiency and incurably diseased persons, including a special inquiry into the possibility and advisability of legalizing sterilization, under proper safeguards, and in certain cases."

Letters, Notes, and Answers.

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are *MUSEUM 9861, 9862, 9863,* and *9864* (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR of the *British Medical Journal, Aitiology Westcent, London.*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*
MEDICAL SECRETARY, *Mediocera Westcent, London.*

The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone 24361 Edinburgh).

QUERIES AND ANSWERS.

URTICARIA AND MALTED MILK.

DR. EVA MCCALL (London, W.1) asks whether any case has been recorded of an attack of urticaria following the ingestion of malted milk. She writes: A case has recently come to my notice of a cup of malted milk being taken for insomnia about 1 a.m.; ten to fifteen minutes afterwards intense itching of the palms set in, and was followed by an outbreak of "nettle rash" on the arms, wrists, chest, and back. The eyelids were also affected. The patient in question had never taken the preparation before, and had no idiosyncrasy to any other articles of diet. The eruption cleared up in about twenty-four hours, but the patient felt very out of sorts for a day or two afterwards.

TREATMENT OF UNCONTROLLABLE COUGH.

"D. H. A." asks for advice in the treatment of a patient, aged 48, who has suffered for many years from an uncontrollable cough attended with profuse expectoration. When young he had nasal obstruction, due to enlarged turbinals, portions of which were removed; the breathing power was improved. The present condition is abundant anterior and posterior nasal catarrh and laryngeal irritability, making the coughing almost incessant. The bronchial tubes are clear. The patient is of a nervous temperament: the general health is good and there is no asthma. He has had treatment by a specialist, but to no purpose. Unfortunately he is a heavy smoker, but he objects to giving up the habit. There appears to be a vicious circle in the case. The frequency of the cough is not only a distress to himself, but to all his friends. Is this a case for hypnotic suggestion? Can any method of relief be suggested?

EMISSION WITHOUT ORGASM.

"M.B., B.S." writes: A male patient, aged 50, apparently healthy, complains that he suffers from failure of orgasm at emission; otherwise the act is normal, and can be repeated. I should be glad of suggestions for treatment.

DIPHTHERIA CARRIERS.

"H. H." writes: What is the legal position in the following case? A servant in a house has been in contact with a case of diphtheria after ten days' service. At the request of the mistress a swab is taken. Report gives Klebs-Loeffler bacilli present, there being no clinical evidence whatever. Is one bound to report such a case, and can the medical officer remove such case forthwith? From a long experience in general practice I can recall numerous errors due to relying on laboratory diagnosis alone, and I still maintain that clinical evidence should be the main basis before the subjects should lose their liberty.

*** We have referred this question to Dr. J. Graham Forbes, who makes the following comment:

The Infectious Diseases Notification Act (1899) provides the legal means *available* for the compulsory removal and isolation of a case of infectious disease, which are applied unless there are convenient facilities for isolation and treatment in a private house. In the case in question the desirability or necessity to notify a carrier of Klebs-Loeffler bacilli, presenting no clinical signs of diphtheria, must be a matter for the practitioner personally to decide on the particular circumstances affecting the person concerned, and in this instance her employer and those of the family with whom there is necessarily contact, particularly if there are children, in view of their greater liability to attack, when infected. Obviously it is impracticable by notification to secure removal to hospital of every diphtheria carrier, and such a course is only advisable in certain cases, on condition that the original bacteriological report has been confirmed by subsequent examination, *and*, most important of all, by the isolation in pure culture of the bacillus for *application of the virulence test.* If found virulent, then decision should be made as to the necessity for notification, and this must depend on the circumstances of the case. The Notification Act does not *legally*, I believe, apply to the carrier unless it can be said that the individual is suffering from the disease. The notification of diphtheria carriers is frequently a matter for arrangement with the medical officer of health, and may be dependent on his particular views and wishes. In the case in point, it would seem advisable to refer the matter to the local medical officer of health, *if* there is confirmation of the original report and if the bacilli found are proved to be virulent.

MOONSHINE?

DR. E. GERALD STANLEY (Paris) writes: Can "C. I." seriously doubt but that the moon has a very marked influence, not only on the inhabitants of "hot" countries, but on those of all others? Of course, the moon does not "shine"; she reflects to us the light of the sun and also reflects back to us our own light. Recalling the colossal upheaval of the waters of the earth which we call tides, caused by the moon, the effect of which is more than double that of the sun (7 to 3), imagination suggests terrifying possibilities as to her influence on human actions. The "harmful" action of the moon, especially in perigee, had been suggested three thousand years before Galileo: to the best of my knowledge the only suggestion of the application to human ills was made by Rudyard Kipling before the Royal Society of Medicine last year. If "C. I." is really interested in these awful possibilities, he should address his inquiries to astronomers and physicists, and, above all, to those few who still have intelligent imagination. As I reflect, a song comes back to me from my rather younger days, "I'm such a silly when the moon comes out." The writer of this lyric had imagination; in our pitiful ignorance why not hold speech with such, even though they only write songs for the Gaiety?

SIR JAMES BARR writes: Why does "C. I." (February 16th, p. 331) seek information from "any medical man" about moonshine? Medical men do not possess a monopoly in wisdom or knowledge on any subject. Why does he not himself investigate the truth or otherwise of what he "hears so often"? In an early number of the *Health Journal* there was a very informative article by Professor Baly of Liverpool on the effects of the polarized light of the moon on the growth of seedlings and the maturation of plants. These, of course, are beneficial effects, but, on the other hand, it is well known that polarized light reflected from the snow is seriously damaging to the eyesight of the St. Bernard dogs, so much so that it is feared that that variety of dogs may become extinct. It is not likely that the effect on human species in the East would be so serious, but we should be all pleased to hear of any reliable information which can be gathered on the subject.

DR. WINNIFRED W. BOLAND (Newry, co. Down) writes: I have just returned from a two years' stay in an up-country district in Bengal. I had my bed on a south-east corner of the verandah all the year round, except during the monsoons. The moon shone full on my face as long as it was not directly overhead, which was very rarely. I suffered no ill effects, but a friend who stayed with me for four months always took care that the moon should not shine on her face, as she once got "moonstruck." Her husband woke her up because her face was all drawn on one side and continued so for a few hours after she was roused. I never met anyone else who was "moonstruck," but I did not make any serious inquiries.

"B. H. R." (Glasgow) writes: During three years' residence in Central Africa I found that moonshine gave me a headache. I made it a practice in going out at night to put on a light pith helmet or double felt hat. I connected this harmful influence of the moon with what one reads of in the Psalms, "The sun shall not smite thee by day, nor the moon by night."

"G. A. C. G." writes: From personal experience I can say that the direct rays of the moon on a sleeper can be very disagreeable, if not actually harmful. In the Middle East such exposure caused nightmares and headaches. In the Far East these symptoms were accentuated and accompanied by a morning "thick head." Prevention entailed moving the bed or closing the shutters.

"H. M. S." writes: There is a superstition in Burma that exposure of the face and head to moonlight while in bed has a baneful effect upon one's brain, meaning mental make-up. Perhaps this is evolved from the legend that mental storms in the insane correspond to phases of the moon.

INCOME TAX.

Depreciation of Plant and Machinery.

"A. B. C." has claimed an allowance, based on 15 per cent., in respect of an electro-cardiograph. The inspector is willing to allow the cost of replacement if and when incurred, but not the percentage allowance for depreciation. In his view the electro-cardiograph is an instrument, and not an item of "plant or machinery."

*** In a fairly recent case, Daphne *v.* Shaw, decided in 1926, Mr. Justice Rowlatt said: "It is impossible to define what is meant by 'plant and machinery' . . . it means apparatus, alive or dead, stationary or movable, to achieve the operations which a person wants to achieve in his vocation." In that particular case the judge refused the allowance when claimed in respect of the appellant's professional library, but a perusal of his judgement leaves one convinced that he would have granted it in respect of the apparatus mentioned by "A. B. C." We suggest that he refer the inspector to the case quoted above.

LETTERS, NOTES, ETC.

TREATMENT OF PNEUMONIA.

DR. R. C. WORSLEY (Topsham) writes: Recent letters on the treatment of pneumonia in the *Journal* (January 5th, p. 15, and February 16th, p. 332) prompt me to record a singular case I attended recently. A man, aged 76, had, on November 26th, an attack of localized pneumonia at the right base, which I took to be influenzal, and which ended by crisis on December 2nd. On December 21st he was found to have broncho-pneumonia, involving the left base; this spread over the back of the lower lobe, the temperature ranging between 100° and 102° F. for more than a month. On the ninth day of this attack he was needled over the point of maximum dullness, half an ounce of clear fluid being removed. Three days later he was needled again, without result. A week later still I drew off two ounces of similar fluid, which was found to contain many pus cells, but to be sterile on culture. Colloid manganese injections and creosote were given until January 22nd, when a specimen of sputum was found to contain a few *Staphylococcus albus* and large colonies of streptococcus. Creosote was now pushed twice a day. From that day the temperature fell by lysis, and it has remained practically normal since. The patient was allowed to sit up for short intervals from February 2nd. I do not pin my faith to creosote in pneumonia, but I feel convinced that it exerted a striking influence on the course of the infection in this case, which, considering the age of the patient and the severity of the disease, makes his recovery remarkable. I should be interested to hear if others have seen similar good results in lobular pneumonia.

CARDIOSPASM OR ACHALASIA OF THE CARDIA.

MR. G. W. RAKE (writing from the Johns Hopkins University, Baltimore) says: I wish to correct an error which appeared in my letter to the *British Medical Journal* of December 15th, 1928 (p. 1111), on achalasia, which error was also pointed out by Mr. Beatty in a letter to the *Journal* of January 5th, 1929 (p. 45). Owing to an oversight the first series of figures supposed to be the measurements of the thickness of the oesophageal wall are in reality those of the diameter of the lumen of the specimen. The following figures are those of the thickness of the wall in the first case (the compensated achalasia):

Just below the cricoid	0.2 cm.
Middle of oesophagus	0.8 cm.
Just above the cardia	0.45 cm.

I apologize for the interval of time allowed to elapse before its correction, but unfortunately Mr. Beatty's letter has only just come to my notice.

*** This correction was made, in Mr. Rake's absence abroad, by Dr. A. F. Hurst on January 12th.

MODERN BREAD-MAKING.

DR. A. OGIER WARD (London, E.C.2), in the course of a letter, writes: Can there be any more serious procedure than to eliminate from flour the most valuable part of the grain? The question naturally arises, Why is it removed? The answer requires some lengthy explanation. When we depended on water and windmills for all our flour man could thrive on bread because he got the entire product of the grain minus the bran. Unfortunately, flour so prepared became rancid if kept too long, by reason of the oily products in the phosphatic and nitrogenous elements present, particularly in the germ. And then came the steel miller, who removed the germ and triumphantly offered a fine white flour which would keep almost indefinitely. The demand for whiteness spread, and instinctively the labouring classes began to demand more meat. No wonder! They no longer got the nitrogenous and phosphatic elements in their bread. There are scientists who tell us that the white flour now sold contains all essential ingredients for health. Probably it does for prosperous persons who have as much meat and other foods as they want, but growing children and the poorer classes require all the phosphates and nitrogenous foods they can get, and it is wrong to rob them of these ingredients in their staple diet. From some well-to-do adults and from many of the ignorant poor I hear that they prefer white bread. I have yet to hear of a child who prefers it. I consider it is criminal folly to extract the most valuable part of the grain and then to buy it back, as many do, in the form of a commercial product.

HARVEY AND SCARLATINAL DESQUAMATION.

DR. J. D. ROLLESTON (London, S.W.6) writes: Referring to the statement in my paper on "The history of scarlet fever" (*Journal*, November 24th, 1928, p. 926) that Sennert was the first writer to mention scarlatinal desquamation, my friend Dr. Archibald Malloch, librarian of the New York Academy of Medicine, has drawn my attention to the following passage of Harvey's *Prelectiones Anatomiae Universalis* (p. 12), which was published in 1886, the lectures having been given probably in 1616 for the first time: "Homine porrigine meale avibus voluiando scalptu animalibus equo curried the bird att St. James bemealing as a man scarlet." In their introduction to the *Prelectiones* the committee of the Royal College of Physicians interpret this puzzling sentence as a comparison of the desquamation after scarlet fever to the shaking off of the feather scales of a bird in the royal menagerie then kept at St. James.

CEREBRAL ANGIOSPASM.

DR. F. G. GARDNER (Oxford) writes: The case reported by Dr. F. J. Allen in the *Journal* of February 16th (p. 323) reminds me of one I saw some fifteen years ago. I was asked to visit a man, aged about 75, as he had had a "seizure." I found him hemiplegic, aphasic, and much confused. The urine was loaded with albumin. Hemiplegia, or other "plegias," are not uncommon in uraemia—without gross brain lesions. In this instance, with some purgation and complete rest, the paralysis completely disappeared in the course of twenty-four hours, I confess to my surprise, as I had regarded it as probably of an organic nature. I cannot say anything of the patient's after-history, as he went out of my ken. To-day, I suppose, I should call the condition "cerebral angiospasm." It would be interesting to know the condition of the kidneys in Dr. Allen's case, which seems to have been very similar to mine.

HERPES AND VARICELLA.

"R. P." (Lancashire) writes: In previous issues of the *Journal* suggestions of a relationship between herpes and chicken-pox have been made; the following case appears to have some bearing on the matter. A woman contracted herpes ophthalmia on January 10th; her son, aged 10, returned to school on the 19th, and in a few days chicken-pox developed. Her daughter, after a few days at school, also began an attack of chicken-pox; the youngest daughter did not return to school owing to a cold, and on February 4th chicken-pox developed of a more severe type than in the boy and girl at school. There is no other case of chicken-pox in the district. I should be interested to know what conclusions might be drawn from the above.

TREATMENT OF INFLUENZA.

DR. GARRY SIMPSON (London, W.2) writes: In the *Journal* of June 4th, 1921 (p. 835), Sir G. Archdall Reid of Southsea recommended for cases of acute toxaemia, pneumonia, etc., a mixture of aspirin 10 grains, phenacetin 5 grains, and pulv. ipecac. co. 5 grains, once or twice daily. For some years I have treated all cases of influenza in this way, with such satisfactory results that I would strongly advise brother practitioners to give it a trial. The patient goes to sleep and in an hour or so wakes up with a profuse perspiration, so that fresh garments must be ready to change into. The temperature falls, and the patient has intense relief from the pains, headache, etc. The powder should be repeated in six hours' time, if necessary. Most cases of influenza are cut short by this treatment in twenty-four hours.

ERYTHEMA NODOSUM.

DR. R. A. ROBERTS (Flintshire), continuing the discussion on the relation of erythema nodosum and tuberculosis, published on February 9th (p. 266) and 16th (p. 332), writes: I attended recently a family in which the mother and four children had erythema nodosum simultaneously: one child, a boy aged 14, died shortly after of acute pulmonary tuberculosis.

INFANT FEEDING.

MR. LESLIE J. HARRIS, D.Sc., writes to point out that the work described as having been done by him in the Nutritional Laboratory, Cambridge (*British Medical Journal*, February 23rd, p. 333), was actually done elsewhere, and four years before the inception of the Nutritional Laboratory.

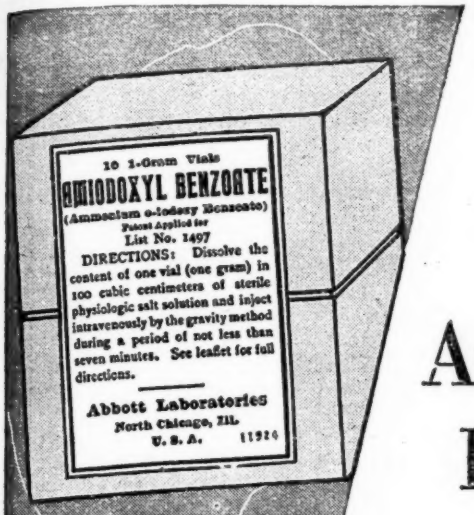
OSTEOPHYTIC GROWTH IN WOMEN.

DR. J. ALEX. THOMSON (Harrogate) asks us to correct a remark attributed to him in the account of the discussion on osteo-arthritis published in the *Journal* of February 23rd. In the first column of page 353 he is reported as having said that osteophytic growth in women was rare, and that he had seen two cases only. What he did say was that extensive osteophytic growth was uncommon among women, and he then put on the screen radiograms of the two worst cases of the kind which he had been able to find among a large number of radiograms.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 47, 48, 49, 50, 53, 54, and 55 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 51 and 52.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 55.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